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THE JOURNAL
OF THE
MINNESOTA STATE MEDICAL ASSOCIATION
AND
THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

A SEMIMONTHLY MEDICAL JOURNAL



W. A. JONES, M. D., EDITOR

VOLUME XXXI

MINNEAPOLIS
W. L. KLEIN, PUBLISHER
1911

WILLIAM TO SELLER
TO
APR 13 1911

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No. 1

THE HEART IN DISEASE OF THE THYROID GLAND*

By J. S. GILFILLAN, M. D.

ST. PAUL

That a relationship exists between the thyroid gland and the heart was early noticed, and occasional reference to cardiac disturbance in goiter patients can be found in the earlier literature. Parry, in 1786, Graves, in 1835, and Basedow, in 1840, described in part the symptom-complex now known by their names. The credit, however, for bringing the subject prominently before the profession belongs to Professor Rose, then of Zurich, who, in 1877, read before the German Surgical Congress his paper on "Goiter Death and the Radical Operation for Goitre." Since this time the literature on the subject has grown to considerable proportions, and at several of the recent congresses in Germany much time has been devoted to goitre and its effect on the heart.

Since an article by Prof. Kraus, in 1899, the fact has been generally conceded that the thyroid may act on the heart in two ways, either by pressure on the air-passages or great vessels, or by exerting certain toxic influences. At present we may classify "goiter heart" as mechanical, or Rose's goiter heart, and toxic, or the goiter heart of Kraus.

In this address I shall neither consider the pathologic anatomy of goiter, nor discuss the various theories regarding the nature of the intoxication in Basedow's disease. The treatment of these conditions must also be slighted, as the time allowed me is insufficient for a complete consideration of the subject. I shall try, briefly, to put before you the facts of clinical im-

portance which I have been able to gather from the literature and from my own limited experience.

Rose's attention was called to the fact that in goiter patients sudden death was not infrequent, at times occurring during operations upon the thyroid. In some cases the trachea, already exposed at the time respiration ceased, was immediately incised, and artificial respiration continued for some time. In spite of these procedures, it was impossible to resuscitate the patient. In such cases examination showed dilatation of the right heart, often with atrophy and degeneration of its muscle. Rose showed that obstruction to respiration either acted on the right heart, by producing changes in the lungs, as emphysema, bronchiectasis, etc., thus impeding the pulmonary circulation, or, without pulmonary changes, increased inspiratory effort caused by increased aspiration of blood into the great veins of the thorax, with overfilling of the right heart, dilatation of its chambers, and subsequent degeneration of the cardiac muscle. Sudden death was, according to his view, due to asphyxia with cardiac paralysis.

The above explanation of the development of the mechanical heart has been upheld, in the main, by later investigations. That cardiac disturbances may be caused by pressure on the nerves of the heart, is admitted, but considered rare. It is probable that the heart may also be affected by pressure on the great veins, but we know very little as to the frequency of such action.

The symptoms of this, the mechanical form of goiter heart, are those of insufficiency of the

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

right heart, added to those of respiratory obstruction. The disturbance usually develops gradually in the course of a long-standing goitre, beginning with alteration of the voice, dyspnea on exertion, stridor, recurring bronchial catarrh, symptoms of congestion, as vertigo, headache, and nose-bleed. Dilatation of the heart to the right is marked, the pulse is frequent and small, often irregular; and, later, orthopnea and general anasarca appear. This form of cardiac disease is not peculiar to goitre, but may be produced by pressure from any tumor.

Prof. Kraus, in 1899 and again in 1906, while recognizing the form of cardiac disturbance described by Rose, called attention to a second cardiovascular symptom-complex observed in goitre patients, not due to mechanical interference, but to increased or altered secretion of the hyperplastic gland acting on the regulatory mechanism of the heart. This symptom-complex may occur in any form of goitre, especially in those that are well vascularized.

The symptoms of this form of goitre heart are as follows (Kraus): the heart-action is strong and rapid, from 90 to 140 per minute, and perhaps as low as 80 during rest, with periodic attacks of severe palpitation with cardiac dyspnea. The large arteries pulsate strongly, the pulse is of small size and lessened tension when very rapid, and the normal jugular pulse is well marked. The eyes are bright, and the pupils somewhat wide, but there is no exophthalmus, unless it be a unilateral protrusion, produced by pressure on the sympathetic. There is slight tremor, not so intense or widespread as in Basedow's disease, usually only of the fingers and tongue. In the more severe cases there is enlargement of the heart to the left, this enlargement varying from time to time, receding with improvement in the general symptoms. With the fluoroscope the enlargement is seen to depend on an increased diastolic distention, the difference in the size of the left heart in systole and diastole being very great. At post-mortem the heart may show hypertrophy, but is often of normal size.

The clinical picture is, to a certain extent, that of the formes frustes of Basedow's disease, but Kraus endeavored to draw a distinct line between goitre heart and Basedow's. He points out that in localities where goitre is endemic Basedow is rare, and that typical Basedow rarely develops in cases of goitre heart. He admits that the clinical differentiation may be difficult.

Kocher recognized the mechanical heart, due

to pressure on the trachea or great vessels, and the toxic heart, due to thyroid hypersecretion. He includes in the same class all cases in which thyreotoxic symptoms are present, from the mildest to typical exophthalmic goitre.

He makes three subdivisions according to the nature of the goitre, as follows: (a) *struma vasculosa*, in which form the thyroid swells rapidly, and a thrill and bruit are present, together with thyreotoxic symptoms, not so well developed as in typical Basedow; (b) *struma gravesiana colloides* or *struma Basedowificata*, in which toxic symptoms occur in the course of a common colloid goitre; and (c) *struma Basedowiana*, with all typical symptoms well developed.

Cardiac disturbance is found to be very common in goitre. Monnier, in 670 operative cases in Kronlein's clinic, found 25 per cent showing heart-changes. These cases nearly all presented obstructive symptoms, consequently the mechanical variety of goitre heart, with right-sided dilatation, preponderated.

Gittermann in Nauheim, in 895 patients with muscular disease of the heart, found 121 with goitre.

Up to the present time statistics regarding the heart in goitre have been unsatisfactory, the nature of the heart disturbances not being accurately noted, so that it is frequently difficult to decide whether the mechanical, toxic, or mixed form was present in a given case.

During the past year Blauel, Muller, and Schlayer report more accurate observations on patients in von Brun's clinic. They divide these cases into three classes; (a) those in which mechanical influences preponderate; (b) those in which toxic symptoms are more prominent; and (c) mixed cases, in which both influences are nearly equally marked.

These cases were thoroughly examined, both by the surgeon and the internist. The degree of tracheal stenosis was determined, as well as the cardiac outline, both by percussion and the orthodiagram. The anatomic relations of the goitre were noted at operation, and the patients again examined at intervals after operation.

In 65 cases of the first group 40 per cent presented cardiac changes. These changes did not always correspond to the extent or duration of the stenosis, nor to the nature or age of the goitre. The heart was enlarged to the right only. After operation a recession of the right border of the heart was noted in about half the cases.

In group b there were 11 cases. All had tachycardia, and in 4 there was enlargement of the left ventricle. Murmurs and accentuation of heart-sounds were often present. After operation all cases were improved, and the enlargement of the heart receded.

In group c stenosis and toxic symptoms were both prominent. Among 14 cases 9 presented cardiac disturbances. In 5 enlargement was to the right, and in 3 to both right and left. Here also the results of operation were favorable.

These statistics show how in mechanical cases the right heart is involved, in toxic cases the left, while in mixed cases the right heart is usually involved, the left only with the right.

It is not probable that tracheal stenosis alone produces the so-called mechanical heart. Romberg believes that the heart usually must first be injured, usually by the toxic secretions of the goiter.

Kocher calls attention to the fact that during or after the administration of iodine in any form for goitre, symptoms of thyroid intoxication often develop. These symptoms, formerly attributed to iodism, are now known to be due to a hyper-secretion of the gland stimulated by iodine. The condition is not produced in patients without a thyroid. Kocher thinks that most cases of secondary Basedow are caused by iodine. At times the symptoms occur when only very small doses have been given and they may appear some time after the remedy has been discontinued.

In goiter heart the ordinary heart-remedies, especially digitalis, are of but little value. In obstructive cases a reduction in the size of the goiter may sometimes be brought about by internal remedies, as iodine. Kocher says that when the heart is already involved this should not be used, as it is apt to increase the toxic action. It follows that these cases are nearly all surgical.

The toxic cases may be treated medically until this has been shown to be inadequate. Kocher states that operation in secondary Basedow is less urgent than in the genuine form. Treatment is by rest, diet, and phosphorus in the form of sodium phosphate. Operation here, as in the mechanical form, should not be too long deferred.

DISCUSSION

Dr. H. S. Plummer (Rochester): The subject is so broad it is impossible to do it justice in a short discussion. I think we owe a good deal to Dr. Gilfillan for bringing this subject before us and for the able way in which he presented it.

A few years ago a great many cases which we are now discovering have an irregularity of circulation, would not have been regarded as due to goiter, and would have attracted no attention associated with the thyroid, even if it had been very prominent. We might classify goiters somewhat to make the subject complete. In taking exophthalmic goiter we have hyperplasia of the gland, in which there are changes of the circulation, and, in younger people, coming on with rapid heart, and so forth. We have, next, the type common to degenerative changes of the gland. The picture is different. The patient looks as if he were poisoned; he has a sallow complexion, tremor, circulatory changes, etc. These are due to degenerating adenoma, a degeneration in so-called colloid or cystic type of goiter. In all these cases the heart is recognized as being damaged, the circulation being interfered with. Then we have types that Dr. Gilfillan has discussed,—mechanical goiter heart and goiter heart from toxin goiter.

I think there are many sides to the question in the discussion of mechanical and toxin goiter heart, and I do not think we are yet prepared to accept this classification and feel that we can place all cases of disturbed heart under two headings. The type of cases of adenoma with degenerative and subjective symptoms, along with tremor, is sometimes classified with the exophthalmic goiter, and at other times with simple goiter, no matter how striking and how true the symptoms of hyperthyroidism are. But if we exclude such cases completely, and take up those cases that have no symptoms of so-called exophthalmic goiter, we have a big group of heart-lesions. There have come under our study about two thousand cases of goiter operation, nearly one-half of them exophthalmic, and a thousand cases in which symptoms of exophthalmic goiter have been excluded. Excluding all cases of mild symptoms of exophthalmus, all cases having tremor, and all cases that have rapid heart, we still have twenty per cent of badly damaged hearts. A good many of these can be classified under mechanical heart, but this does not explain the large number of them. The heart will be dilated with the goiter located high in the neck without apparently producing any pressure, and at the same time without much evidence as to marked toxemia. The question comes up as to whether they are classed as toxemias, and what are the factors common in producing that type of goiter heart? That includes nearly twenty per cent of cases of badly damaged heart from goiter.

Dr. H. A. Tomlinson (St. Peter): I want to speak of the physiological aspect of this subject of the relation between disease in thyroid gland and the heart; and also of the complication of the thyroid disease by pre-existing cardiac incapacity.

According to Gaskell, the organ that becomes the thyroid gland in the vertebrates, is, in the higher invertebrates, a uterus, and, lower down in the scale, one of the nephridia. The persistence of these functional relations is shown in the association of the thyroid and the suprarenal body in their influence over the circulation; also by the frequency of disturbance of thyroid function during adolescence, especially in women. Again, angiomatous enlargement of the thyroid with tachycardia, is not infrequent during pregnancy. Furthermore, the relation of the nerve-supply of the thy-

roid with the cervical sympathetic through the vagus, and with the spinal accelerator fibres going to the heart, shows at once that there should be an intimate association between disease in the thyroid body and disorder in cardiac activity; also that sequential involvement of the vasomotor apparatus is to be expected. I have seen angiomatous enlargement of the thyroid, with tachycardia, follow the shock of injury in a young man, and it is not at all uncommon in women who are disturbed mentally during adolescence, although the cart is put before the horse usually, and the mental disturbance is said to be the result of the thyroid disease. The enlargement of the pulmonary vessels, as well as the dilatation of the arterioles and capillaries, is vasomotor in origin, while the tachycardia results from the effort of the heart to maintain the circulation against the inertia of vasomotor stasis; the heart muscle becoming exhausted from overwork. I have had the opportunity to note in the case of emotional shock in an adolescent, that there was a period of cardiac inhibition with *pulsus tardiva* for several days before the ordinary symptoms of hyperthyroidism made their appearance.

The pathology of these conditions that have become chronic as the result of degenerative changes in the thyroid and heart ought to be apparent, and it is obvious, also, that the cardiac involvement should be progressive, with secondary involvement of the lungs as the result of pulmonary stasis; but we should not lose sight of the fact that, if there is no precedent disease in the heart itself, the cardiac disorder in exophthalmic goiter is secondary to the involvement of the vasomotor apparatus, and the interference with the general circulation. However, pre-existing cardiac incapacity, the result of disease in the organ itself, or secondary to renal involvement, changes the whole clinical picture. There is then the evidence of cardiac failure with dilated cavities, pulmonary engorgement, and not uncommonly sudden death, whereas, when the heart has been sound, the involvement of the thyroid may be extreme and persistent, and the patient live indefinitely in comparative comfort. I have come to believe, as the result of the observation of cases of thyroid disease for considerable periods, that it is important to have as complete a knowledge of pre-existing heart conditions, and the involvement of the other vegetative organs, as it is possible to gain, and that these factors should have very great weight in making the prognosis in thyroid disease with cardiac symptoms. The capacity of the heart-muscle, the condition of the vessel-walls, and the adequacy of the renal function are of especial importance.

Dr. Marx White (Minneapolis): There is one point which neither Dr. Gilfillan nor Dr. Plummer, I believe, had an opportunity to cover, and yet one which I should have liked to hear discussed in this connection, and that is regarding the relation between myocarditis and simple goiter. It is one, I believe, we are considering more than before, and yet one which is not often enough spoken of. I refer to lesions not related to Basedow's disease, i. e., to the considerable number of cases in which is presented thyroid enlargement, simply, so far as the history can be elicited from the patient, cystic goiter in which late in life cardiac dilatation does not seem to be associated with other symptoms of Basedow's disease, but is due to a diffuse

fibroid infiltration of the heart-muscle, a form of fibrosis of the myocardium. I have seen a number of such cases at post-mortem and a fair number clinically and am undecided as yet whether there is any direct association between the goiter and the heart lesion. Whether this is a matter of common observation I do not know. Whether it is that class of cases to which Dr. Plummer referred; of twenty cases without symptoms of Basedow's disease, and yet where cardiac disturbance was present, I do not know, but am inclined to think that he refers to this same class of cases. This should not interest us more than the relation between thyroid toxemia and cardiac enlargement in Basedow's, but requires some attention. Whether it is a mild form of toxemia coming on over a long time and not sufficient to produce recognizable cardiac symptoms, or whether the pathology is not recognized, I do not know, yet the association between long-standing simple goiter and myocarditis is frequent enough to be rather striking.

Dr. L. B. Wilson (Rochester): We are all interested in this paper. It presents to us important conditions from a medical and surgical standpoint. Permit me to call attention to their pathologic condition. Whatever may be the condition of the hearts of the patients who do not die, certainly the hearts of those who do die always give evidence of toxemia. They present typical pictures of chronic poisoning. There is a very marked fragmentation of the heart-muscle; in other words, a chronic right carditis.

We find post-mortem evidence of toxemia in "simple" cases similar to those we find in Basedow's disease. The difference is only in the relative amount of intoxication.

Dr. L. W. Day (Minneapolis): In thinking over this discussion it has occurred to me that there is a strong resemblance between the toxemia spoken of by Dr. Wilson and the toxemia of pregnancy. We now know that every cell of the body is provided with a cell-ferment, or lysin, whose function it is to provide nourishment for the cell with which it is intimately associated, from the surrounding lymph- or bloodstream. If this lysin is over-stimulated it may attack its own host, thereby causing degeneration of the cell itself. This process is known as autolysis. In the intoxications of pregnancy it is believed that ferments from the placenta stimulate the lysins in various parts of the body, causing fatty degeneration and necrosis, particularly in the liver, kidney, blood-vessels, besides other organs. In the case of an enlarged thyroid we may have the liberation of a similar ferment which acts specifically upon the heart-cells, causing the degeneration that we find in the heart-muscle. If the principle is true in the intoxications of pregnancy, why cannot the same principle be applied to the toxemia of exophthalmic goiter?

Dr. C. H. Mayo (Rochester): I have been much interested in the picture Dr. Gilfillan has presented of the thyroid heart. We know the thyroid has to do with dilatation of the capillaries of the body. When they are dilated we have the symptoms of the disease more pronounced. We know that the adrenal has for one of its functions the control of the smaller vessels. When in the early stages of hyperthyroidism we have this effect on the capillaries, we have room for more

blood in the circulation. If we have a pulse of 150 in exophthalmics, and we give them one or two doses of adrenalin, we see the pulse come down.

In the early stages of exophthalmic goiter the blood remains in the capillaries, and the heart beats twice as fast as with half the blood. Later we get toxemia, not necessarily in Basedow's disease only. We often find in old goiter cases which have gone into degeneration an irregular heart of that type. This is not confined to the heart alone, but it affects the kidney and liver, as well as the heart-muscle. It may come with any kind of goiter, and when it comes with exophthalmic goiter you will not get a cure by operation.

Dr. James S. Gilfillan (Essayist): Dr. Plummer spoke of the difficulty in specifying accurately the mechanical and toxic variety of heart, and I think he was quite right. Later on in my paper I would have said that there is some doubt whether mechanical influences alone ever bring about the changes of the heart we see in advanced cases. That is, there must be something besides purely mechanical action. There is something, as Dr. Tomlinson represented, in the influence of the degeneration and weakness of the heart-muscle. In the majority of cases it is the toxic action of the thyroid gland acting on the muscle, even though that may not be evident by clinical examination.

As to the classification of these cases in regard to exophthalmic goiter or Basedow's disease, that is simply a classification by name. Prof. Kraus tried to draw a sharp line between goiter-heart and Basedow's disease, but he admitted often that it was difficult clinically to classify these cases. Kocher draws no line and includes in the same class all cases where toxic symptoms are present.

Dr. Wilson spoke of the changes found in the heart post-mortem in cases that did not show a stenosis of the trachea. It is often difficult to demonstrate stenosis of the trachea at post-mortem. Rose's theory is that these tracheal rings are softened by pressure of the goiter, and stenosis did not exist with the trachea in a certain position, but that in another position kinking would be brought about and stenosis produced, and by taking out the trachea he found at one point the trachea would kink right over like a soft rubber tube. The blood-changes in these cases of goiter heart are absent, in almost no case exhibiting toxic symptoms, and they are the same as those found in typical exophthalmic goiter.

It is a good thing to remember that all cases of hyperthyroidism are not pathologic, but we do see cases during puberty and pregnancy and after acute infection, and in such cases that condition is normal. This is especially important because, I think, it is a serious mistake to operate on such a person. Those cases do not progress to any severe extent; they pass away. The operation might leave a permanent condition, while this is a temporary condition.

Dr. Kocher, before the German medical association last year, called attention to the effect of iodine on a goiter in so far as hyperthyroidism is concerned, saying that toxic symptoms may be produced by the administration of iodine in cases of a diseased thyroid. He goes so far as to say that secondary Basedow's disease is usually produced by iodine, and that cases of goiter with symptoms of Basedow's disease, or what we call exophthalmic goiter, may be produced almost to the entire extent.

SINUS INFLAMMATION AND ITS EFFECT ON THE EYES*

BY THOS. McDAVITT, M. D.

ST. PAUL

In the study of sinus infection and its probable relation to disease of the eye, the anatomy of the orbit is of great importance and interest. The orbit is formed from portions of the frontal bone, of the body, the lesser and greater wings of the sphenoid, the malar, the superior maxillary, the ethmoid, palatal, and lachrymal bones. Three of these bones, the frontal, the ethmoid, and the sphenoid, enter into the formation of both orbits. When we consider that the antrum of Highmore in the body of the superior maxilla lies immediately under the orbit, that the ethmoid cells are separated on the nasal side by thin walls of porous bone, that the frontal sinus is distant only the thickness of a comparatively thin section of bone, that the sphenoidal cells in the body of the sphenoid are not far

away, and that two processes of this bone assist in the formation of the cavity of the orbit, it is not surprising that purulent infection of any of these cavities might at times cause complications and disease in the orbit and often in the eyeball itself.

The lateral masses of the ethmoid consist of a number of thin-walled cavities, the ethmoidal cells, interposed between two vertical plates of bone, the outer one of which forms part of the orbit and the inner part of the nasal fossa of the corresponding side. The upper surface of each lateral mass presents a number of apparently half-broken cellular spaces. These are closed in when articulated by the edges of the ethmoidal notch of the frontal bone. Crossing this surface are two grooves on each side, converted into canals by articulation with the frontal. They are the anterior and posterior ethmoidal

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

foramina, and open on the inner wall of the orbit. This gives direct connection between the interior of the ethmoid and the orbit. The inner surface of each lateral mass forms part of the outer wall of the nasal fossa of the corresponding side. By means of an orifice in the upper part of the superior meatus of the nose, the posterior ethmoidal cells open into the nose. By a large orifice at the upper and front part of the middle meatus of the nose, the anterior ethmoidal cells communicate with the nose, and through these cells the frontal sinuses also communicate with the nose by means of a funnel-shaped canal, the infundibulum. Thus the anterior ethmoidal cells communicate with the frontal sinuses above and the middle meatus below. The posterior cells open into the superior meatus above and communicate occasionally with the sphenoidal sinuses.

The sphenoidal sinuses are two large irregular cavities, hollowed out of the interior of the body of the sphenoid. They do not exist in children, but increase in size as age advances and communicate with the upper and back part of the nose and sometimes with the posterior ethmoid cells, as before stated. The upper margin of the anterior surface articulates with the orbital plate of the frontal bone and thus forms part of the orbital wall.

The antrum of Highmore, or maxillary sinus, is a large triangular-shaped cavity hollowed out of the superior maxillary bone. Its walls are extremely thin, and it communicates with the middle meatus of nose, usually by two small apertures. In the recent state one of these is usually closed by the lining membrane of the sinus.

In this short résumé of the anatomy of their parts, it is found that all of the sinuses are very close to the orbit and in all separated only by a thin shell of bone, that a direct opening exists between the ethmoid and the orbit, and that between the sphenoidal and ethmoidal cells frequently there exists direct communication; also that all of them have direct communication with the nasal cavity. It follows, naturally, that pus could easily be transmitted directly into the orbital cavity by the giving way of a thin shell of bone from any one of these infected sinuses. This happens and sometimes causes direct pressure injury to the eyeball. A number of years ago a renowned United States senator found one of his eyes was gradually protruding from the socket. The more prominent it became the more the vision became impaired until finally the vision was

lost, evidently from the stretching of the optic nerve, together with other pathological changes, and probably from neuroretinal changes. Some time after the vision was gone he consulted a doctor for some nasal trouble. The doctor, on examining the nose on the side of the protruded eye, used a probe, and suddenly it broke through into the antrum of Highmore and was followed by a gush of pus, which flowed profusely. As the pus came away the eyeball sank back toward the socket. No doubt the pus had broken through the thin wall of the maxillary portion of the orbit. The sight of the eye was permanently lost. This indicates what direct pressure of pus may do.

An account of a case somewhat similar from infected frontal sinus follows:

The patient presented himself with a fistulous opening on the inner side of the left orbit. A probe followed the fistulous opening back toward the apex of the orbit, and roughened bone was found. He thought that eye was somewhat prominent. The vision was impaired, and there was slight retinitis. The fistulous tract was opened to its base and curetted. This was followed by healing. In the course of two or three weeks pus again appeared, and a fistulous opening into the frontal sinus was found. The sinus was curetted, and it was then found that he had a history of recurrent trouble of this kind for several years. The opening into the sinus was enlarged and washed out, the outflow being caught under the nose, coming down through the infundibulum. Treatment was kept up for several months, ending finally in recovery from the infected sinus and the eye regaining its visual acuity.

In infectious processes involving the sphenoidal or ethmoidal cells, the drainage of the infectious material into the nasal cavity and the forcible blowing of the nose on the part of the patient may force the infection into the orbit and thus infect the eyeball. Kyle reports a case in which the patient almost lost the sight of one eye from an infectious conjunctivitis and iritis, primarily due to an infection of the sphenoidal cells. In the ordinary "cold in the head" a certain amount of congestion between the sphenoid and ethmoid cells exists; and the eye-symptoms, such as tenderness, burning sensation, pain, soreness on moving the eyeballs, and blurring of the images, are caused by the slight cellulitis and inflammatory process, which in turn is caused by the distention within the involved cavity. The same pathological phenomena exist, except in degree, in the acute, chronic and infectious cases.

When we consider that all these cavities are virtually lined with a continuous mucous membrane; that there is no direct opening between the orbit, except as stated, and these cavities; that the lachrymal and nasal duct open in the nose near the outlet of the orifice from the antrum of Highmore; and that all infectious secretions from any of the accessory sinuses must find vent through the nose, the surprise is that infection of all these cavities does not take place whenever any one is involved.

Risley states that "affections of the sinus are responsible for optic-nerve disease, but in many cases of persistent asthenopia with fluffy, turgid, and woolly choroid." Jones says there is no disease of the eye that cannot be caused by nasal disease and sinus affections. Grunwald, Berger, and Ziem agree with him, but this broad statement is denied by other authorities. Birch-Hirschfield states that out of 684 cases of orbital inflammation 429 were traced to accessory-sinus causes. In acute inflammation of the accessory sinuses usually there is a history of exposure to cold, influenza, or other infectious disease. The pain is dull, aching, or of a boring character. Tenderness over the sinus region is increased by percussion. The patient often states that the eye on the affected side when he attempts to look up, hurts, the muscle seeming to be involved in the edema, and the lids are somewhat edematous. There is tenderness at the inner angle of the eye, which is more marked in frontal sinus inflammation than in the others.

Loeb has some diagrams showing the relation of the sphenoidal sinuses to the optic nerve in the orbit, showing how a closed empyema of the sphenoidal sinuses would be more likely to produce ocular symptoms in some cases than in others.

Posey believes that many obscure cases of palsy of the muscles of the eye, often attributed to rheumatism, proceed from sinus disease of some sort. Periostitis, optic-nerve disorder, orbital cellulitis and abscess, brain abscess, thrombosis of the cavernous sinus, may all be caused by sinus disease. St. Clair Thomson states that orbital periostitis, usually attributed to syphilis, rheumatism, or some dyscrasia, is most frequently caused by sinus or nasal suppuration. Optic-nerve disorders are frequently caused by sinus troubles. It is most important that all sinus involvement be excluded. A negative rhinologic report is not conclusive. Indeed, Fuchs before the British Medical Association last year urged that if orbital symptoms were sufficiently marked

to indicate sinus disease, opening of the sinuses should be performed, although nasal examination might prove negative. A unilateral optic neuritis is generally suggestive of sphenoidal sinus trouble. A single choked disc has been followed by recovery of a useful eye by cleaning the ethmoidal and sphenoidal sinuses.

MacWhinnie has made a careful study of the visual field in a number of cases of sinus involvement. Fuchs and Birch-Hirschfield recognize the possibility of a central scotoma in sphenoidal involvement and state that it is often one of the early symptoms of such involvement.

Many observers, among them Grunwald, Ziem, Hoffner, and others, found a normal visual field in 36 cases of accessory sinus disease. McWhinnie, however, failed to find a normal field in any of his studied cases; enlargement of the blind-spot with isolated scotoma in the intermediate zone were found. He also strongly advises opening the sphenoidal sinus in cases of optic neuritis, or choked disc showing paracentral scotomata. He states that in several of his cases probing the sphenoidal sinus increased the fundus congestion, and in one case the cornea became hazy and led him to believe that it was really the result of absorption of toxic products from this sinus through the lymphatics, although no established relation has been found between the lymphatics of the eye and this sinus other than the very noticeable widening of the perivascular lymph-channels in the axial strand, demonstrated first by Schieck pathologically. His conclusions are as follows:

1. The center visual acuity may or may not be diminished, although it is usually lessened.
2. Normal visual fields without scotomata would indicate imperfect perimetric chart, hasty procedure, or indifferent taking of the same.
3. The absence of pus in the nose, with or without proptosis, does not indicate a normal sphenoid.
4. Relative scotomata for red or white are always present, regardless of whether the blind-spot is enlarged or not.
5. Contraction of the field of vision always for red, may be for white.

Scotomata disappear before the field enlargement takes place, following operative procedure.

DISCUSSION

Dr. E. J. Brown (Minneapolis): Dr. McDavitt's excellent paper deserves more of a discussion than I am prepared to give it. I want to say, however, that these cases are being recognized more than they have been, and as time goes on we shall find more

obscure conditions of the body dependent upon these nasal sinus suppurations. Before I came here this afternoon I operated on an elderly man by removing a middle turbinal, which was wholly degenerated with very little bone left, and with an enormous polyp. The man is between 50 and 60 years of age and in miserable health, having suffered greatly from asthma for years. He has been advertising a "sure cure" for asthma from his little shop in Minneapolis, but he has not been able to cure himself. Of late he has been depressed and has been suffering with pain in his lower limbs and has had pain through the abdomen. The doctors at the City Hospital, according to his story, did not succeed in finding out what was the matter with him, and thus far I have not been able to find out any definite pathological conditions to account for his pain. I told him the probability was that the trouble in the nasal sinus was responsible for his rheumatic pains and the distress he suffers in the limbs in the lower part of his body. I prevailed upon him to have those pathological conditions in the nose removed as far as possible, and today I removed that miserable condition on one side. It may not effect any decided result, but I am confident that the rheumatic and other septic conditions throughout the body depend, oftener than we know, upon the nasal sinus suppuration, as well as upon suppuration in the adenoids and tonsils.

Dr. Frank C. Todd (Minneapolis): This subject is one which is timely to bring to the attention of the Association. I think we have not been wise for many years to the fact that many of these so-called asthenopias are dependent upon sinus trouble, and that they are really due to sinus infection. Sinus infection involving the ethmoidal sinuses is very common, so common that in antrum and sphenoidal diseases it is often present when we least suspect it. In these cases where the patient has a one-sided or double suppuration, it is evident that there must be some sinus trouble present; and likewise in those cases where polyps are present. There are many cases, however, in which these evident symptoms are not present, and it becomes necessary to make a careful study. Dr. MacWhinnie's paper quoted by Dr. McDavitt is a valuable contribution along these lines. I happened to be in Seattle six weeks ago when I had the opportunity to talk with Dr. MacWhinnie and go over some of his cases. His claim is that a sphenoidal trouble can be diagnosed by taking the field of vision if the field of vision is properly taken, and certainly from the list of cases he has had, evidence is strong. In taking these fields, however, one has to be exceedingly careful. He tells me he spends about three-fourths of an hour in outlining these fields, so as to be sure not to make any mistake. It is exceedingly valuable to have this matter brought to our attention as a means of recognizing sinus troubles.

Another valuable way in making diagnosis of ethmoidal and sinus troubles when we find no other conspicuous evidence, such as polyps, is the use of the aspirator. This is practiced after spraying of the nasal spaces with adrenalin. The aspirator applied to the nostrils will suck secretion into view, and the observer can see from what sinus it comes. During the earlier days of practice I, and, I presume, most of those here, were in the habit of treating cases of polyps strictly as diseases of themselves. Many of the cases that have

gone, time and again, to the nose-specialist in the early days had one polyp after another removed. Of course any case of that kind must arise in some sinus infection, usually from the ethmoidal sinus, and permanent cure can be brought about only by opening and correcting the sinuses.

Dr. H. McL. Morton: I should like to remark upon the anatomical abnormalities of the skull and orbits that bear upon certain changes found in the optic nerves and intra-ocular structures. At the last meeting of the Heidelberg Ophthalmological Congress I heard a most interesting paper by Uthoff of Breslau, who spoke of these changes occurring in the eye, and he ascribed them to the traumatism that caused the change of form in the skull, which, at the same time, by the sudden pressure drives the intracranial fluids along the sheath of the optic nerve. I have myself seen several such cases in the past twenty years.

Dr. W. R. Murray (Minneapolis): The influence of diseased nasal accessory sinuses upon superficial lesions of the eye is a condition with which we have long been familiar. Many cases of dacryocystitis, orbital abscess, conjunctivitis, corneal lesions, and edema of the lids, are due to infection from a neighboring sinus. Various reflex eye-pains and so-called ocular headaches are sometimes due to a nasal or accessory sinus involvement. Involvement of the anterior group of nasal sinuses, the maxillary, anterior ethmoidal, and frontal sinuses, are more likely to cause these anterior ocular lesions, while involvement of the posterior group, the posterior ethmoids and sphenoid, are more frequently responsible for the deeper ocular complications, and it is with this latter form of eye-involvement that much interesting work has been done during recent years. Birch-Hirschfeld, Onodi, Zunkerandl, and others have done much to clear up many of these obscure cases. Onodi, in particular, has shown the great variability in the relationship of the posterior ethmoid cells and the sphenoid sinus to the optic nerve; and in many cases of these atypical sinuses he has shown that the optical canal may communicate freely with these cavities. When we recognize the fact that the bony wall of the optic canal sometimes contains openings, allowing the lining membrane of these sinuses to come into direct contact with the sheath of the optic nerve, it is not surprising that an involvement of the sinus may cause an optic neuritis, and it has been shown that a single atypical sphenoid sinus may be in direct relationship with both optic canals, thus making it possible to have a double optic neuritis as a result of involvement of one sphenoid sinus. Frequently the only sign of ocular involvement will be found in a contracted visual field with a small central scotoma.

In cases of optic neuritis secondary to sinusitis the optic nerve involvement may be due to direct pressure on the sheath of the nerve by the retained secretion, or may be due to interference with the venous circulation in the orbit.

Dr. Arnold Schwyzer (Essayist): I do not know that I have very much to say in closing the discussion. I have done a good deal of esophagoscopy in my practice, but I have gotten along and used only the esophagoscope as an instrument. I had the other instrument for a long while and did not use it because I had good use from the esophagoscope and got along first rate.

EPIDEMIC POLIOMYELITIS: ITS PREVENTION, DIAGNOSIS, AND TREATMENT*

By W. A. JONES, M. D.

MINNEAPOLIS

Infantile spinal paralysis was first described by Heine, in 1840, and further elaborated by Duchenne, Roth of Basle, L. Clark, Hayem, Charcot, and Kussmaul, the last author naming the disease *anterior poliomyelitis*. Leyden, in a number of rapidly fatal cases, was able to demonstrate the inflammatory character by discovering cellular infiltration in the anterior horns. (Westphal's Archives 1864.)

The early descriptions of this disease made it a clinical and pathological entity. Since its occurrence in epidemic form in Norway and Sweden, since 1875, and in many sections in the United States, in 1907, and in other countries, France, Austria, Australia, and Germany, since that time, it is probable that poliomyelitis is "a generic name covering groups of symptoms and descriptive of the effects of certain lesions of the spinal cord and brain, of which epidemic poliomyelitis is merely one, but the most important variety."—Modern Clinical Medicine, 1908, Church.

"We are now willing to admit that we are dealing with an infectious and probably a contagious disease, or, in broader terms, a communicable disease, involving the central nervous system."—Flexner, Journal, A. M. A., Sept. 24, 1910.

Acute ascending paralysis, the so-called Landry's paralysis, and what we assumed to be types of multiple neuritis are now looked upon as probable infections in the nervous system, and may be properly classified under the same general heading.

Many theories have been advanced to account for these epidemics and to explain the paths of invasion. The ordinary routes of travel, such as railroads, post-roads, and steamboat lines, offer a partial solution of the pathway of communication.

This theory of infection and contagion is strengthened by the isolated outbreak of epidemics occurring in Scandinavia and about Minnesota through the influx of immigrants from Norway and Sweden. "The data collected in Scandinavia indicate that the contagion can be carried by intermediate persons from the stricken to the healthy, and from patients not frankly paralysed, but suffering from slight or

so-called abortive attacks of the disease." (Flexner.)

Dust, the bite of insects, and the summer season, notably July, August, and September, when extreme heat prevails, present factors for consideration. Unfortunately, no fixed theories apply for all epidemics, as the disease may prevail under these mentioned conditions and localities one year and not in the following years.

The nasopharyngeal mucous membrane, the lymphatics, the filaments of the olfactory nerve, which pass through the cribriform plate of the ethmoid to the meninges of the brain, open the way for invasion, as well as for elimination for the virus, not only of epidemic poliomyelitis, but of epidemic cerebrospinal meningitis.

The point of attack, either in the brain or spinal cord, must be through the lymphatics or the blood-stream, but why certain areas are selected for inflammatory or destructive purposes is unexplained.

The introduction of the virus through other channels, notably the gastro-intestinal tract, rarely, if ever, produces the disease.

The virus under high power exhibits minute points, circular or slightly oval in form, which possibly represent the parasite. It lives under extraordinary conditions, for instance, in glycerine when dried under caustic potash or frozen. It succumbs under heat and is readily destroyed by one per cent solution of hydrogen peroxide or menthol.

Diagnosis.—The diagnosis of the disease in its early stages is extremely difficult, as its progress is not infrequently so rapid that no analyses can be made until after the classical symptoms are plainly visible. It is possible, however, in many suspected cases to make early and frequent examinations of the cerebrospinal fluid by lumbar puncture and thus anticipate the paralysis.

The period of incubation varies from two to twenty days, the average number being from five to nine days.

The prodromal symptoms given in their order may suggest a guide to diagnosis, particularly if an epidemic is in progress. They are fever, irritability and restlessness, pain in the back of the head, diarrhea, apathy, rigidity of the neck, vomiting, and convulsions. Following these symptoms, in varying degrees and uncertain intervals,

*Read before the Minnesota State Sanitary Conference, at Minneapolis, Oct. 4, 1910.

there is a muscular paralysis, more or less general and temporary; then in special groups of muscles there is a frank paralysis.

The difficulties in diagnosis are found in the atypical forms of the disease, the onset and sequence of symptoms varying so greatly that an early diagnosis in many cases is impossible. Now that this infectious nervous disorder is so widespread, the profession must study every acute illness with the possibilities of a subsequent paralysis in mind. To differentiate between epidemic poliomyelitis and epidemic cerebrospinal meningitis, is no easy task, as it is admitted that the virus of poliomyelitis may attack the membranes, as well as the structure, of the nervous system. That the two forms of disease may be combined is to be considered. In many cases the early symptoms are common to both diseases, and in the diagnostic field is cleared only by the cardinal exhibition of symptoms typical to its kind. In epidemic cerebrospinal meningitis the epidemic is more apt to appear in winter than in summer. Lumbar puncture shows a turbidity of the cerebrospinal fluid; under culture the diplococcus intracellularis is demonstrable; pain is less constant; convulsions are more frequent; injection of an antiserum into the spinal canal is promptly followed by improvement in the prodromal symptoms; explosive vomiting is common; persistency and prolongation of symptoms, such as rigidity of neck, stupor and Kernig's sign, and the irregular and varied paralysis that form the sequels of the disease are present.

Wickmann divided poliomyelitis into eight groups:

1. The spinal type.
2. The type of ascending or descending palsy (Landry's).
3. The bulbar (Medin) or pontine (Oppenheim) type.
4. The cerebral or encephalitic type.
5. The ataxia type.
6. The polyneuritic type.
7. The meningeal type.
8. Abortive types.

Of these groups the spinal type is the predominating form.

In the majority of patients prodromal symptoms are present, but cases may occur without noticeable symptoms, or are so mild in form as to be unsuspected, unless there are other cases in the neighborhood to call attention to the illness.

Prevention.—The prevention of epidemic polio-

myelitis demands the observance of all rules laid down by the board of health for the suppression of communicable diseases in general and isolation of the patient at the earliest possible moment. During an epidemic period all acute illnesses should be considered communicable until proven otherwise. The disinfection of clothing and excretions, particularly of the latter, from the throat, nose, and intestinal tract, is imperative. The nurse or person in charge should observe the strictest precautions in her relations with other members of the family, and should wear clothing suitable for the occasion, easily removed and easily replaced. During the summer months houses should be guarded by screens, to keep out flies and other insects that may be carriers of the disease. These measures may seem harsh, but are vitally essential to prevent others from becoming infected.

Treatment.—The treatment of this disease and its unfortunate and common complications can be summed up in a few words. Rest is the most essential factor. Correct, normal, and easy positions for the body and limbs at the onset of the disease are necessary, even in suspected cases. It is not always possible to restrain a restless child, but as far as possible rest must be secured. Elimination by the intestinal tract can be obtained by calomel, castor oil, salines, and enemas. Elimination by the skin can be successfully carried out by putting the patient into a hot pack or hot-air bath, before or after the paralysis occurs. Later a prolonged tub-bath at about 100° F. for ten or fifteen minutes every four hours is beneficial. The baths assist elimination and relieve pain. A saline or Schott bath is equally efficient if the administration can be controlled by the physician. The diet should be liquid and simple, but generous and given every four hours. It may consist of milk, broths, junket, soft-boiled eggs, toast, and fruit-juices, if not contra-indicted or antagonistic to medication.

For pain or temperature an ice-bag may be used, and such drugs as aspirin, phenacetin, or sodium salicylate, in doses suitable to the age of the patient. As early as possible and through the acute stages in suspected or frank cases, urotropin in full doses should be given.

When the acute symptoms have disappeared and the paralysis is evident, the tub-baths should be continued at longer intervals and during the time the body lies floating or supported in the water, gentle movements of the limbs to restore their normal position should be employed. The

bath relieves pain, relaxes strained muscles, relieves tire, and makes massage easy to administer. Movements can be made under water a full two weeks before they can be made in bed. Exercises can be planned in the bath-tub and made a basis for subsequent movements or massage.

Exercises for paralysed limbs may be developed to fit the child's needs, but must be slowly increased in excursion and force. Too hasty attempts to restore paralysed muscles results in strain and exhaustion of already weakened groups. There is more hidden power in paralysed muscle-groups than we know, hence it is necessary to individualize in the exercise treatment. Many pleasurable methods may be employed to entertain the child while the exercise cure is being established.

The future location and occupation of the patient should be given full consideration, as in many cases a life-time crippling of muscles remains. The poliomyelitic must not be condemned to a useless existence, as there are many occu-

pations to which he may be trained. One must not forget to train the child to a proper mental adaptation to his case. This removes the hopeless depression and reticence which may accompany the helplessness.

Electricity is of questionable advantage, other than for diagnostic purposes, and much more can be accomplished by manual or mechanical exercise.

Contractures and deformities can be corrected by habitual normal postures, corrective manipulations, mechanical appliances, tenotomies, fasciotomies, and muscle- and nerve-transplantation.

The neurologist and the orthopedist must combine their knowledge in the alleviation of symptoms.

If a few rules, embracing rest, position, protection, baths, exercise, and the correction of deformities, were observed, there would be fewer helpless or stationary cripples from poliomyelitis.

REPORT OF A CASE OF ABDOMINAL PREGNANCY*

By F. A. DUNSMOOR, M. D.

MINNEAPOLIS

The patient is of Swedish-American birth; aged 33; wife of a barber; has been sick since February 1, 1910, which is the date of the beginning of her last menstrual period.

Family history: Father, mother, and two brothers are all living and well. Her husband has never been sick.

Previous illness: Has had diseases of childhood only; denies all venereal diseases; injured in back at 13.

Sexual history: Menstruation commenced at 13, and was always painful and excessive. She thought this due to the back injury. Was quite regular, and was of 28-day type. It lasted eight to ten days. At the age of fourteen, a physician corrected a retrodisplaced uterus, and the dysmenorrhea and menorrhagia ceased. She was married in 1902 at the age of 25. In 1906 (married four years) she missed one period; no symptoms or signs of pregnancy; she enjoyed good health until Feb. 1, 1910.

Present trouble: Her last menstrual period began Feb. 1, 1910, and lasted twelve days, the

flow being more than normal. She was threatened with abortion at each of the four following dates when she should have started her menstrual period. The breasts were enlarged and exuded milk from July 12 on. Fetal movements were first felt in July, gradually becoming more violent through September until October 1st, when she prepared for labor, as she thought it was time and the movements were so severe that she thought the baby was being born. This agony continued until October 13th, when the movements and pains ceased entirely, as did the vomiting, which had followed every meal throughout the pregnancy. As the patient worded it, "I was hungry but afraid to eat." Her abdomen became smaller, and feeling that her baby was dead she asked her physician, Dr. W. M. Bartley, of Cheyenne, N. D., to dilate the cervix to remove the baby. This was done on October 24th, and the "uterus found empty." Dr. Bartley made a diagnosis of extra-uterine pregnancy at full term, with dead child.

On October 26th, she entered our service at the Swedish Hospital. Upon examination I found purulent, serous discharge from the uter-

*Presented before the Minnesota Academy of Medicine, November 2, 1910.

ine canal, which was elongated and dilated to admit the entire index finger. The uterine cavity narrowed at the fundus, and the fibroid uterus was made out, and was the size of the double fist, with a fluctuating sac above containing the child. The temperature was 98° F; pulse, 110; and respiration, 24. The urine contained albumen, 1-16 per cent acid; acid; 1027 s. p.; bloody; hyaline casts; no sugar. The blood-test gave hemoglobin, 85 per cent; leucocytes, 8,600.

Diagnosis: Dr. Bartley's diagnosis of abdominal pregnancy was confirmed, and the patient was prepared for operation that evening.

Operation: On October 27th, the abdomen was opened by mesial incision. I found the membranes and mural peritoneum inseparable. The incision was made directly into the sac, and a pedal extraction of a female child was made. The amniotic fluid was grumous, black, and feculent. Great care was exercised to prevent contamination of the general peritoneal cavity, and all fluids were carefully removed, and the cavity was sponged with iodoform gauze.

The placenta now presented the problem of the operation. It apparently had no connection with the tube, but the omentum was the undoubted source of nutrition. The danger of contaminating the peritoneal cavity, if the secundines were removed, seemed less than the danger of sepsis, if left to be gradually extruded; therefore a rent was made high up in the sac, and a piece of rubber tubing was passed behind the greater mass. After separating the sigmoid and pushing it back, this tubing was constantly tightened until all bleeding points from omentum, intestines, and peritoneum were controlled. Then the omentum was tied in sections, and the fimbriated end of the right tube was ligated. The uterus had several pedunculated fibroids, filling the true pelvis, but as the tubes were intact, and the patient's condition serious, no attempt was made to do a hysterectomy. Iodo-

form gauze was placed posteriorly to the uterus to control a parenchymatous oozing, and a rubber tube was pushed to the bottom of Douglas' pouch, and the wound closed.

The patient was on the table twenty-five minutes; pulse, 160; respiration, 34. We gave hypodermoclysis and hypodermic injections of camphorated oil and ether. On October 30th (the third day) the temperature rose to 102° F; pulse, 130; and the wound was dressed and the gauze removed. Codeine was given for pain in one-grain doses.

On November 1st, (fifth day) the temperature was 99° F; pulse, 90; and patient was put on semisolid diet.

Present condition: Free serous discharge required daily dressing. Lysol douches were given as there was some discharge from the vagina since the patient entered on my service. This discharge was examined, and a pure culture of staphylococcus aureus found.

The blood, etc., showed hemoglobin 70 per cent; leucocytes, 20,750. The urine was neutral, and the s. g. 1,020; there was no albumin, sugar, or casts.

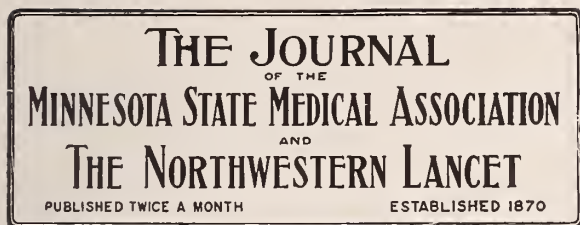
The prognosis is not good.

Medical treatment: Hypodermoclysis and enteroclysis. We gave codeine, gr. 1, hypodermically the first three evenings; laxative and douche daily; and strychnine, gr. 1-30, every four hours.

The baby was a girl, weighed 8½ lbs., and was fully developed. There was some maceration, most noticeable about the nose.

The placenta was very large and irregular in shape, and showed more maceration than the only part of it was removed at the operation. fetus. The placenta was not weighed because only part of it was removed at operation.

Note.—The patient completely recovered and returned to her home November 27th.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

JANUARY 1, 1911.

TO OUR READERS

Perhaps the most heartfelt greetings that go forth at this season of each year from one person to a body of people are those of the devoted minister to his flock. Next in sincerity, we are sure, are the greetings of the editor to his readers, especially of the editor who is not "working" his readers in behalf of the business office from which his head and heart are directed.

Our greetings go forth today with no possible, or possibly suspected, taint of the mercenary, but mixed, it is true, with a pride in THE JOURNAL-LANCET, a pride very much increased by the attitude of the Council at its special meeting last week to which reference is made below.

We are certain that no apology need be made for either the substance or the length of the editorial following this, and we wish to express the earnest desire to have every one of our subscribers read carefully all that is said in the editorial and in the letters following it. If THE JOURNAL-LANCET is to do the work outlined in Dean Wesbrook's letter, and somewhat elaborated in the editorial, it must have the hearty co-operation of its readers, both in their individual and their official capacities, the latter referring particularly to the co-operation of the county and district societies, not alone in Minnesota, but in each of the Northwestern states.

ABOUT OURSELVES

January 1, 1911

He is, indeed, a very blind editor who cannot see, for both his journal and his readers, better times in the future than have been in the past, even though difficulties may somewhat obscure his vision. The editor of THE JOURNAL-LANCET (we call it that for short) sees big things ahead, but he cannot speak of them quite satisfactorily in the third person singular, so *he* will switch off to the impersonal, editorial *we*, and reveal some of his visions—visions of long standing which recent events have made sharper in detail and more definite in significance.

The late U. S. census awakened all of us to a realization of the magnitude and the marvelous growth of the Northwest, a territory truly indeed of empire sweep, whose growing need of medical literature, of Northwestern origin and Northwestern flavor, must be met by a journal whose interests are not limited by the boundaries of one or two states; and that THE JOURNAL-LANCET can best meet this need we think is self-apparent. Let us look at the situation for a moment, and somewhat in detail.

Publicity is the watchword of the day, not alone that the people may know what their servants are doing, but that their servants may co-operate for public betterment. The Medical Department of the State University, with prospective yet certain financial resources unequalled in extent by those of any other medical school in the world, needs publicity for self-development and for the proper working out of its great problems. Our Board of Control, with several medically conducted institutions under its management, greatly needs a proper medium of publicity. Our State Sanitary Conference can best make its influence felt and can most fully accomplish its beneficent mission by publicity disseminated through physicians. Our State Board of Health would be greatly handicapped in its state work without the support and the co-operation of physicians, which can be most readily gained through a medical journal; and the Board's influence can be extended to other states in no other practicable way. Our State Board of Medical Examiners, which easily stands, in some respects, at the head of all such boards in the country, has failed, in our opinion, to exert a tithe of its potential influence because its work has not been properly made known, even to physicians, and much less to the laity, whose interests alone it serves.

But the need of our own state health organizations, including medical schools and all the boards with medical functions, is felt, even in greater degree, by like organizations in our neighboring states; and these workers in one state need the co-operation of like workers in the other states. This interchange of helpfulness can be effected in no other way than by a continuous intercommunication between all those who are engaged in working out the great problem of conserving health and saving life. This intercommunication simply means publicity, and the only practicable "publicity clearing-house" for interests of this character is a broadly and wisely conducted medical journal, with its home in the medical center of the Northwest, namely, the Twin Cities; and we say most confidently that THE JOURNAL-LANCET can best carry on this work.

Established in 1870 as THE NORTHWESTERN SURGICAL JOURNAL, later THE NORTHWESTERN LANCET, the paper has been for forty years the recognized, and almost the only, means of communication between the medical men of the Northwest. Contemporaneous with the birth and growth of medical education and medical literature in this section, it has played no small part in the development of these two co-ordinate forces. It has been exceedingly fortunate from the first, especially in two directions, and as the present editor disclaims any part in this work other than following the traditions of the paper, he feels at liberty to speak freely upon the subject. The paper has stirred up no antagonisms in the profession and has been subservient to no clique or interests. It has encouraged and assisted many writers in a manner that has done much to give Northwestern medical literature an unusually high standing with the profession of the entire country. At all times during the past thirty years or more there has been some one connected with the journal possessing special aptitude and training for putting manuscripts into good literary form, as well as freeing them from the gross errors that often mar an otherwise excellent paper.

As our readers know, for many years THE LANCET was the official organ of the Minnesota State Medical Association and of other state associations for part of the time. During the past five years it has been under the sole management of the Minnesota Association. At the last annual meeting of the Association it was voted unanimously by the House of Delegates to continue the arrangement for five years, but

with a proviso that the name NORTHWESTERN LANCET be dropped from the title. The editor, who occupied the chair as president of the Association, accepted the terms of the contract on the part of the Lancet Publishing Company, of which he is president. All was done in good faith, and the change of name was advocated by our friends. The publisher, upon his return to the city, he being absent during the time of the meeting, likewise acquiesced in the arrangement, but further consideration showed the plan to be quite *impracticable*. As the House of Delegates could not well be convened, the editor addressed a letter to about forty physicians who have been contributors to the paper, some of them for many years, explaining the situation and seeking their opinions, in the hope that some way out of the difficulty could be found. We give below some of these letters in full and extracts from others, in order that members of the Association may know how THE JOURNAL-LANCET is appreciated by men best able to judge of its worth and work.

After these letters had been sent out legal obstacles were discovered which made compliance with the terms of the contract wholly *impossible*. Therefore the Publication Committee was called into conference with the editor and publisher, and the Committee suggested that the Council be convened. The Council met in St. Paul on December 27th, with all members but one present. After very full discussion, the Council voted unanimously to extend the expiring contract until the meeting of the Association next October. We believe the Council gained from this conference three things: a fuller understanding of the work of conducting a medical journal, a higher appreciation of THE JOURNAL-LANCET, and a conviction that the journal has a great work to do in the advancement of medical interests in the Northwest.

DR. F. F. WESBROOK, DEAN OF THE COLLEGE OF
MEDICINE AND SURGERY, THE UNI-
VERSITY OF MINNESOTA
MINNEAPOLIS

I feel that the medical journal situation in our state has almost unlimited possibilities. It would seem possible to develop friendly co-operation of all the interests in this state with due regard to the functions and rights of all concerned, so as to concentrate our efforts in one journal. Such a journal should represent everything of interest in the state, and in order to fulfill its function should extend its sphere of influence to our neighboring states.

So far as the opportunity within the state is concerned, a number of departments might be created and provided with material in each issue as follows:

1. Medical and public health interests of the State Board of Control institutions could well support a de-

partment in the paper, of stimulating interest to the state at large and of actual value to the country as a whole.

2. The State Board of Health could have in each issue a great deal of material interesting and helpful to those within and without the borders of the state.

3. The State University's medical and public health interests should be easily able to supply, through some responsible mechanism, a great deal of material for each issue in which the profession at home and abroad would be much interested, and which could serve as a feeder to the lay press.

4. Occasionally, if not regularly, the State Board of Medical Examiners would have a very great deal of material which the State of Minnesota needs, and which would be profitable to the profession at large and to similar boards in other states, at home and abroad.

A department could be instituted which would be a clearing-house of news relative to licensure, legal protection against frauds, and other such matters.

I am sure that every one would be glad to carry out such a mutually helpful program.

In relation to the proposition which THE LANCET is facing at present, I may say that I quite agree that the good-will of the paper is wholly in its name. I also feel quite sure that it is a very distinct advantage not to limit its circulation to Minnesota.

I am certainly glad to express my high appreciation of the editorial work done in the presentation of papers in THE LANCET. The extreme care taken in regard to the literary supervision has been helpful to me, and I presume to nearly every one of the contributors.

DR. A. W. ABBOTT
MINNEAPOLIS

I wish to congratulate you on the very excellent manner in which you have conducted the "Lancet." Your proof-readings and corrections have been careful and fair. I particularly appreciate the suggestions as to arrangement of matter which I have given you for publication.

DR. W. T. ADAMS
ELGIN

I have been a subscriber to THE LANCET almost from its first issue. It has been a journal that I have very much admired. Most of the few papers which I have presented for publication, have appeared in its columns, and the painstaking care with which the editors and publishers have endeavored to have my papers correctly printed, and to convey the exact idea intended, have been truly gratifying. I have regarded THE LANCET as one of the journals in which the busy workers of the rank and file of the profession may record their experiences, with the feeling that they will be given the same courteous consideration that writers of greater renown receive.

I, for one, will feel that there is something lacking in the journal if THE LANCET loses its identity. There are associations connected with its history as the first medical journal published in Minnesota and with the pioneers who had the courage to undertake such an enterprise, that are too sacred to be lightly considered.

DR. EMERY H. BAYLEY
LAKE CITY

I think the English diction used in THE JOURNAL-LANCET of most excellent quality. Some one acquainted with English and medical terms must go over carefully and critically the articles submitted. Such work takes special skill and time, and should be greatly appreciated by all contributors and readers.

While State pride might be gratified by having a journal of the State Association, such a journal would lose its interest to medical men outside of our own state.

THE JOURNAL-LANCET today is a Western medical journal, and its contributions are read by more than they would be if published in any purely state journal.

FROM DR. RICHARD OLDING BEARD
MINNEAPOLIS

It seems to me to be clear that you cannot wisely

accept the terms imposed by the State Association; nor can the State Association, I think, afford to sacrifice its relations with THE LANCET. I think it is very important that a medical journal, such as yours, should command a wide field, not confined by any means to the state.

I am sure that the State Association has received a very large and important service in the editing of its transactions.

DR. J. W. BELL
MINNEAPOLIS

For the past twenty-five years I have occasionally contributed papers to THE NORTHWESTERN LANCET, as well as to other journals. The extreme care exercised by THE LANCET, especially as to correct termination of medical terms, and punctilious attention to punctuation and grammatical construction, has always impressed me as a desirable attribute in a medical journal. The subject-matter appearing in THE LANCET is probably in as good form as that of any journal published in this country.

I was one of the pioneers in urging the Association to establish a journal, and have never had cause to regret it. I have looked upon the arrangement with THE LANCET as most fortunate for the journal and the Association and believe that the majority of the members of the Association feel the same way.

On investigation and deliberation I realize more fully than I did at the time the matter was under consideration in the House of Delegates that the omission of NORTHWESTERN LANCET from the title of the journal means much to the paper, and its retention very little to the Association, consequently, if the contract hinges, as I presume it does, on that clause I trust it will be eliminated and the contract closed.

DR. A. E. BENJAMIN
MINNEAPOLIS

I am quite in sympathy with you in not desiring to leave off the name "Northwestern Lancet." I think when the House of Delegates looks at it from the viewpoint of the owners, publishers and editors, they will agree with your ideas. Personally, I have been very much pleased with the way manuscripts have been handled by THE LANCET. I would like very much to see the contract renewed with the State Medical Association, but with the same title as formerly.

DR. A. J. COX
TYLER

I have some experience as an editor, and I know something of the trials of an editor and of the labor that is required to make over some of the articles that are handed in, even by some who are supposed to be well educated.

THE LANCET to me has become an office necessity, and as far as I am concerned, I do not care whether it has the name of the Minnesota State Medical Journal on the cover or not.

I made over the motion, you remember, to conform to the wishes of some of the delegates. I trust that all will be fixed up so that we can have THE LANCET just the same as we have been having it.

DR. M. M. GHENT
ST. PAUL

THE LANCET has always been of the greatest help to me in getting my manuscripts ready for publication. I appreciate the favor, and hope the good feeling and good work will keep up.

DR. ARTHUR J. GILLETTE
ST. PAUL

I must confess frankly that I do not understand anything about the publication of a medical journal. neither do I know anything about the business side of it. I do know, however, that to me THE LANCET is very valuable. First, I have received the greatest courtesy and help in the publishing of articles, and, second, it is a very valuable medical journal, and therefore, if it is continued as in the past, it is more than satisfactory to me. Your success in the past is sufficient evidence that whatever action you may take or whatever policy you may follow in the future will

be the best for the medical profession. Therefore I am perfectly willing to abide by your action, and wish to be recognized always a subscriber.

DR. CHRISTOPHER GRAHAM, OF DRS. MAYO,
GRAHAM, PLUMMER & JUDD
ROCHESTER

A paper to be of real value must reach many readers, and must have or make financial backing. The better financial success, the greater effort may be put forth. Our state paper cannot afford to do anything to limit its number of readers, and I am sure the change proposed will narrow its field. Of course, no delegate would wish this, and I am glad you have sought to correct this error.

The paper has been exceedingly careful in correcting manuscript, and has made many of us say better in our articles than we had written. I know of no paper whose editors have gone so far and carefully into this matter of manuscript oversight, and I am sure every contributor has more than once thanked the management for time and expense spent in turning out a really finished paper. We desire no change that will in any measure handicap the broad view and work of our state paper.

DR. GEORGE DOUGLAS HEAD
MINNEAPOLIS

I wish to say that it has always been a source of satisfaction to me to feel that in THE LANCET we have had a medical journal which has paid such painstaking attention to the literary form in which it has published its papers. I feel quite certain that there is no medical paper in the West, and very few in this country, that pays more careful attention to medical terminology, correct spelling, and proper grammatical construction than does THE LANCET.

The State Association has been most fortunate, indeed, in having such expert service at its command in the publication of its transactions as has been furnished by the editorial staff of THE LANCET, and it would be making a great mistake if it failed to avail itself of such valuable service for the next five years.

I wish also to take this opportunity of expressing personally my appreciation of your efforts in furthering the best interests of our profession during the years in which you have served upon the editorial staff of THE LANCET.

DR. H. W. HILL, DIRECTOR EPIDEMIOLOGICAL
DIVISION OF THE STATE BOARD
OF HEALTH
MINNEAPOLIS

Your letter of November 15th regarding the dropping the name NORTHWESTERN LANCET, has been received. I am able to state that as associate editor, and now a member of the Journal Committee of the American Journal of Public Hygiene, which has been merged into the Journal of the American Public Health Association, I have been very much interested in editorial matters for the past eight or nine years. I have contributed a number of articles to THE NORTHWESTERN LANCET and not only received every courtesy and facility for publication, but also was particularly impressed with the care exercised in proof-reading by your staff. You have been most careful, as well as most courteous, in calling attention to errors or obscurities in the original manuscript, and it has struck me that I can send worse copy to you with more chance of getting it published correctly than would be the fact with any other of the many publications with which I have had to deal as contributor, not excluding the journal with which I have been officially connected.

Let me say also that as an editor I fully appreciate the points made with regard to the good-will of the paper and weight of a name in newspaper matters, and particularly appreciate the restriction of circulation which would result on giving the paper an exclusively Minnesota cast. One of the greatest financial mistakes that our Journal (Am. J. of Pub. Hyg.) ever made was in retaining on the cover the name of the "Massachusetts Association of Boards of Health," for notwithstanding the fact that this association had originated the Journal and was a large factor in maintaining it, yet the mere fact that the Journal

retained the local connection prevented its becoming accepted as a National journal.

I appreciate that you do not desire to have THE LANCET a National journal, but the same argument would apply to its circulation in neighboring states, should it be known as a purely Minnesota publication. I believe that the only proper bargain which the Association can make with THE LANCET, if it wished to take it over exclusively for its own use, would be to guarantee a sum sufficient to cover the present annual income of the journal under the name of THE NORTHWESTERN LANCET, with the probable allowance for the reasonable increase which THE LANCET can properly expect during the next ten years.

DR. CHRISTIAN JOHNSON
WILLMAR

It has again been brought to my attention that the change in the title of THE JOURNAL-LANCET is a difficult proposition from both a professional and business standpoint. I was in the publishing business myself some years ago, and happen to know some of the features of the business. I will frankly say that I believe, personally speaking, that the present title-page is entirely satisfactory from every point of view. THE NORTHWESTERN LANCET was known all over the Northwest a quarter of a century ago, and that old name should not, in my opinion, be eliminated.

DR. FREDERICK LEAVITT
ST. PAUL

I read with considerable interest in the last issue of THE LANCET the transactions of the House of Delegates, relative to the renewal of our contract with the Lancet Publishing Company. As to calling your journal by another name, I think it is asking too much. To me it would seem quite enough to simply indicate, perhaps within parentheses, that THE LANCET was the official organ of the Minnesota State Medical Association. If I were publisher or owner of a journal so well known as THE LANCET, I would not permit my trade-mark to be so unceremoniously wiped off the map.

Yes, indeed, I have been much pleased with the careful editing that my contributions have received.

DR. WALTER J. MARCLEY, SUPERINTENDENT OF
THE STATE SANATORIUM
WALKER

I can only say my manuscripts have always been handled in your office very satisfactorily to me, and I think the work you put out is of a very high class in every particular. I believe with you thoroughly that it would be a mistake to narrow the scope of your excellent journal.

No doubt the influence of your journal in bringing about a very desirable co-operation, and in raising the standard of medical practice in this part of the country, is invaluable. As the Medical Department of the University of Minnesota is coming more and more to stand for the very best in medical education, it is eminently fitting that the medical journal published in Minneapolis would be a part of this progress and should not be confined alone to the medical interests of Minnesota. If the proposition made by the House of Delegates is to narrow the scope of your work, I should express an emphatic opinion against it, and it would seem from your exposition that this would be the case.

DR. ARTHUR T. MANN
MINNEAPOLIS

I wish to express to you my appreciation of the great service your paper has rendered me in the accurate way in which the manuscripts of my papers have been edited. This applies to the attainment of correct grammatical form and to exactness in the use of special terms, proper names, and foreign words.

This has been true also in connection with the publishing of the yearly volume of transactions of the Western Surgical Association. As Secretary of this Association I have the privilege of publishing our volume of transactions wherever it seems that the work will be done best. For some five years we have had THE LANCET office take charge of this work. The

result has been a clean, attractive volume, accurate in diction, and singularly free from mistakes.

DR. WILLIAM J. MAYO
ROCHESTER

The contributions to THE NORTHWESTERN LANCET have always been from the best men in the Northwest, and the printing, paper, illustrations, etc., are all that could be desired.

As far as we are concerned, we are pleased with the uniform excellent conduct of the journal. The various articles which we have had published in THE LANCET from time to time have been handled in a most satisfactory manner.

DR. JAMES E. MOORE
MINNEAPOLIS

I believe all of your points well taken, and in thinking over the matter, I believe at the present time the advantages of the affiliation are all in favor of the Association rather than of the journal.

In reference to the handling of manuscripts, I gladly give expression to my appreciation of the help of the men on your staff who have attended to the proofs, and I have encouraged some of the younger men to make contributions, assuring them that they would receive great help from the same source from which I have received it for many years.

I have two suggestions to make. First, a state journal cannot be the highest type of medical journal because it is obliged to publish some poor stuff. The following suggestion I make as an individual and not as an official. A number of the active workers in the University feel that the time is fast approaching when the Medical Department of the University must have an official organ. Is it not possible that an affiliation between THE LANCET and the University may be made that would ensure a high-grade medical journal and be helpful to all parties concerned? We already have a goodly amount of very valuable material, and I am urging members of my staff, particularly the brainy young men, to write up interesting cases and new work, and if we had a paper with an established circulation it would be more encouraging to them, and be helpful to all parties concerned.

I have had this matter of an official organ of the University in mind for some time, and have discussed it informally with a few University men. It surely will do no harm to take the matter under advisement. We need a representative organ of the Northwest, and with the good reputation THE LANCET already has and the assurance of support from the best men in the University, it seems to me that it would be possible to build up a high-grade, profitable, and altogether representative medical journal in Minneapolis.

DR. L. A. NIPPERT
MINNEAPOLIS

I regret very much that THE LANCET cannot accept the publishing of the transactions of the State Medical Association under the conditions imposed.

I appreciate highly the care and help that THE LANCET has given me in the publishing of the papers written by me at various times, especially in the pains taken to put them in good literary form.

While I appreciate the difficulty of issuing the paper under the conditions named, I still hope that you may reconsider your decision and publish the transactions for another year.

DR. C. J. RINGNELL
MINNEAPOLIS

In the past I have contributed papers to THE NORTHWESTERN LANCET and have always been pleased with the courtesy and willingness displayed by its editors in correcting and otherwise getting the papers into the best possible shape. There has always been a desire to encourage contributors in every possible way and make one feel at home. I think that is a splendid spirit, and will in the end bring the best possible results. Personally, I should regret very much to see the name *Lancet* stricken from the title of the publication.

I have been a regular subscriber since I commenced to practice, now almost twenty years, and THE LAN-

CET has always been a welcome guest in my office. I generally make it a practice to look through the pages of each copy carefully, which is more than I can say about the other journals. It has been a sort of a semimonthly letter from the home profession.

You can readily see that the name *Lancet* is very dear to me, and I am sure there are a great many professional brethren who feel the same way. It appears to me that the present arrangement that the State Medical Association has with THE LANCET, is very satisfactory, as far as the Association is concerned, and I am sure is of great benefit to its members. Do not permit THE LANCET to die a premature death!

DR. ARNOLD SCHWYZER
ST. PAUL

It seems to me that probably the House of Delegates did not consider the detriment which a change of name would bring to THE LANCET. I feel very positively that it would be a detriment to THE LANCET and to the men who publish some of their work in it. Your argument, that it would shut off the states west of us, is undoubtedly a good one, and thus we should lose what we have striven for, i.e., to get into better contact with our western neighbors.

I often think what a hard and thankless task it is to get all the manuscripts into readable shape. Even were I able to do it, I should not have the necessary patience and endurance.

DR. H. L. STAPLES
MINNEAPOLIS

What few contributions I have made to your publication have been most carefully corrected and arranged. Careless spelling and punctuation detract greatly from what otherwise would be a scholarly paper.

For about forty years THE LANCET has represented the medical profession of this state and the entire Northwest in an admirable manner, and I should dislike to have the title submerged.

I was a delegate at the recent state meeting and should vote for a continuation of the title as it is at present or abbreviated to JOURNAL-LANCET until the next meeting.

DR. H. B. SWEETSER
MINNEAPOLIS

I heartily agree with THE LANCET in refusing to drop its distinctive title and hope the matter may be adjusted so you may still remain the official organ of the State Association.

I wish also to testify to the courtesy of THE LANCET to me personally at all times in rendering me every assistance in producing a presentable paper.

DR. FRANK C. TODD
MINNEAPOLIS

It seems to me a mistake for the Minnesota State Medical Association to compel its official journal to strike out the name *Northwestern Lancet*, a name which is of value to the State Medical Association and the profession of the state, which has been gained after many years of conscientious work on the part of the editors and publishers of that magazine.

The publishers and editors of THE LANCET have always been particularly courteous to its contributors, assisting very much in the editing of their contributions and aiding in the preparation of the illustrations, etc., in a way to make the articles more interesting to its readers, and the publication of such articles easier for the writers.

Far from being a disadvantage, it should be an advantage, to the State Medical Association, its members, and its contributors, to publish its proceedings in a journal whose circulation extends outside of its own membership. If it is desirable for Minnesota to remain, as it has been in the past, the medical center of the Northwest, it is important that its official organ should be a journal which has an established circulation, especially in the surrounding states, and is

seeking at all times to enlarge that circulation. It is even desirable that the same journal should be likewise the official organ of the states tributary to Minnesota.

When the State Medical Association compels the journal, however, to retain only the name, "The Journal of the State Medical Association," it at once limits the circulation largely to its own membership, thereby lessening its value to that very Association, and also to its contributors who make up its contents.

DR. EDWARD L. TUOHY
DULUTH

I have read with special interest the report of the meeting of the House of Delegates in which the matter of the name of the journal was discussed. From what you said in the discussion as well as the letter which you have sent me, I cannot but feel that your arguments are all good and your points well taken. The fact that you want a journal to represent the entire Northwest, a territory in which our State University must be the dominant institution, all appeals to me as very good logic. THE JOURNAL-LANCET has been well printed, and has contained a lot of good news, telling me more about men I know than any other source at my disposal.

On the few occasions in which some of my matter has been incorporated into the journal, the matter of preparing proof and rendering the material clear has been done in the most excellent manner. I can sincerely hope that you will find it possible to carry the points which you have so well taken.

DR. S. MARK WHITE
MINNEAPOLIS

I am glad to express my appreciation of the valuable and helpful work constantly carried on by the editorial and publishing staff of THE JOURNAL-LANCET, and especially of your valuable services in making the form and construction of papers conform to good usage. Your suggestions are uniformly valuable and acceptable, and after experience with a number of publishers I consider your work as being of a very high order.

I wish to add that I should not like to see the influence of THE JOURNAL-LANCET limited to Minnesota as is proposed. The whole Northwest needs a first-class journal published in the Twin Cities.

DR. FRANKLIN R. WRIGHT
MINNEAPOLIS

The decision of THE LANCET not to change its name, is right. The name *Northwestern Lancet* stands for all the hard editorial work of the past thirty years, and is the journal's most valuable asset. To change it would be to destroy its value and receive nothing in return. No one but the editor knows the amount of hard work necessary to keep a journal, issuing two numbers per month, up to standard.

The average physician is not a student of English and does not realize the amount of work performed by the editor in preparing manuscripts for the reader. He sends a carefully prepared paper for publication, and has his "copy," with the corrected proof, returned for his approval. Then, as he sees the many corrections made by the editor, he begins to realize the amount of work necessary to make his best effort presentable, and to appreciate the careful kindness of the editor in making these corrections without criticism.

The editor of THE LANCET has always been very kind to me. His careful corrections and friendly suggestions have been very helpful, and have added much to the literary value of my work.

I hope the alliance between THE LANCET and the State Association will not be broken. Both are gainers by this union; separation will entail a loss which will fall heaviest on the State Association.

BOOK NOTICES

THE ELEMENTS OF THE SCIENCE OF NUTRITION.

By Graham Lusk, Ph. D., Sc. D., F. R. S. (Edin.), Professor of Physiology at the Cornell University Medical College, New York City. Second Edition Revised and Enlarged. Philadelphia and London; W. B. Saunders Company, 1909.

It is refreshing to pick up a work of the character of this one. Although it covers a broad field, and must rest on the literature of the subject, it shows throughout that the writer himself is a diligent producer, with no small credit due him for original work. It is no mere compilation.

Lusk's debt to, and respect for, Carl von Voit is not only acknowledged in the dedication, but is evident in every chapter of the text.

The introduction gives a lucid history of the subject, and is followed by the regulation chapter on starvation. The three following divisions discuss the regulation of temperature and the influence of protein food on metabolism. Here is found a mass of scientific information enlivened now and then by such statements as "the old-time fraud of 'patent' foods being 'brain restorers' is as foolish a lie as can be written."

Occasionally, a lack of complete revision is shown, when Rietschel's refuted findings on the lack of creatinin excretion in infants are given.

A good discussion of the caloric value of food-stuffs is given, together with a satisfactory treatment of the influence of the ingestion of the fat and carbohydrates and of mechanical work on the metabolism.

The chapter on food requirement during growth is very good. Metabolism in anemia, gout, exophthalmic goiter, and fever is discussed. The author's own studies are evident in his handling of diabetes.

A thorough understanding of the contents of this book by the profession would go far in lessening the tendency to lean on the statements of "detail men" for over-knowledge of dietetics.

GENERAL MEDICINE. Vols. 6 and 7 of the Practical Medicine Series for 1910. By Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D. The Year Book Publishers, 40 Dearborn St., Chicago.

It is difficult to say anything new about these little volumes, not because they are not rich in

new ideas, but because one expects them to be.

The Year Book is an exceedingly valuable Digest for the man of medicine who cannot in the nature of things as they are, edit for himself the great mass of current iatrolologic literature.

In the volumes under consideration, there is a great deal worthy of special mention, and the rest is but little less interesting and profitable to read. The chapter devoted to typhoid fever is especially absorbing, since the reader may not have realized that there is so much new material on the subject. Here one finds treatment, including vaccine therapy, dietetics, etc., and the effect of treatment upon the opsonic index, considered down to the minute.

Selections relative to the later phases of other infections are equally well made, and one cannot read them without realizing more than ever before that a new era has dawned in the history of infectious diseases, and that he who is not familiar with opsonic methods is not modern in 1911.

The amount of space given to the *x*-ray in the diagnosis of various affections of the lungs, mediastinum, esophagus, and stomach, would seem to indicate that these progressive editors recognize the great importance of this method in internal medicine. The section on stomach and intestinal diseases is, to the reviewer, at least, one of special interest. While there is not much strictly new material here, one is constantly impressed, as he reads, with the thought that past theories are present facts, and that this field is fast becoming one of science.

Volume VII is devoted chiefly to diseases of the thorax and arterial system, and is equally abounding in valuable and fresh data.

Pulmonary tuberculosis is very properly awarded a large amount of space, and the material is so well selected that it is all well worth reading.

Throughout the work pedantic discussions are carefully avoided, and there is scarcely a paragraph which has not something of real value in it. The reader is not asked to accept the material presented without question, but is offered an excellent opportunity to discriminate for himself.

DISEASES OF INFANCY AND CHILDHOOD: Their Dietetic, Hygienic, and Medical Treatment. A text-book designed for Practitioners and Students in Medicine. By Louis Fischer, M. D., Attending Physician to the Willard Parker and Riverside Hospitals of New York City; Attending Pediatricist to the Sydenham Hospital;

Former Instructor in Diseases of Children at the New York Post-graduate Medical School and Hospital; and Fellow of the New York Academy of Medicine. Third Edition, with Three Hundred and Three Illustrations, Several in Colors, and Twenty-nine Full-page Half-tone and Color Plates. Philadelphia: F. A. Davis Company, Publishers, 1910.

This new edition of a standard work appears with many illustrations, including some very good colored plates, of which the one of the von Pirquet reaction is especially good. This opportunity has been taken to include much of the newer work, such as Jehle's work on lordotic albuminuria, and Flexner's work. The use of horse-serum for hemophilia is also discussed. There are some parts of the discussion on infant-feeding which could be improved, especially where the old teaching of protein indigestion is considered. The statement under pyelitis, "this condition is rarely met with in practice," which is repeated under cystitis, I am sure will not be agreed to by most pediatricists.

On the whole, the work is one of the best American texts.

A MANUAL OF NURSING. By Margaret Frances Donahue, formerly Supt. of Nurses and Prin. of the Training-school of the Philadelphia General Hospital. Cloth; pp. 489. D. Appleton & Co., New York and London, 1910.

This book is a very plain and practical statement of a nurse's duties to herself, her employer, and her patient; and being written in short, clear sentences, attractive style, and well illustrated, it should prove valuable in any nurses' training-school, and in the hands of any nurse who wishes to refresh her training by a good review of the entire subject of nursing.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Minneapolis Club, Minneapolis, Wednesday evening, December 7th, with fifty-one members present.

After a business session Dr. A. W. Abbott presented a clinical report of bicornous uterus with specimens.

DR. ABBOTT'S CASES

CASE 1.—This case is presented for the reason that we have in this instance a definite knowledge of the rapidity of the growth of a uterine myoma.

In July, 1902, a myomectomy was made, and fourteen small myomata were removed, the largest being about one inch in diameter.

In July, 1903, an ovarian cyst was removed, at which time there was no evidence of return of the myomata.

In 1906 a small myoma was discovered upon the anterior surface of the uterus, about the size of a large pea.

In 1908 the tumor had grown to the size of a walnut, and in the last two years the growth has been much more active, and this tumor, 5 inches by 4 inches, was removed on November 2d.

We have, therefore, positive evidence that this tumor grew, in four years, from the size of a pea to the dimensions stated, and that the increase has been very much more rapid in the last two, than in the first two years.

CASE 2.—This case is one of myoma with primary carcinoma of both ovaries, with the following history: September 29, 1910: patient is 45 years of age; never pregnant; menses have been getting irregular for the last few months; amount is normal; the last occurrence, ten days ago; for ten to fifteen years she has had some pelvic soreness.

In August, 1910, she first noticed an abdominal swelling; had no pain, but describes herself as "sick all over." She is emaciated, with a poor appetite.

Microscopic examination shows an adenocarcinoma in both ovaries. Sections made from the myoma show no cercinomatous invasion.

There is a beginning necrosis in the myoma, shown by a fleshy spot about an inch and a half in diameter.

CASE 3.—This case is one of vesico-ovarian fistula. The patient's age is 37; has had four children, the youngest being 13 years of age; no previous illness, except smallpox seven years ago.

April 29, 1910: frequent urination; pain and burning in the bladder came on suddenly.

About May 20th she began to have severe, constant pain in the left pelvis with fever.

On July 2nd she was first seen by me. The next day I drained two ounces of pus from an abscess behind the uterus. It is said by her physician that two weeks later she had an acute catarrhal jaundice.

She was brought to the hospital September 15, 1910. At this time there was a well-marked tumefaction of the left ovary. There was also an aggravated cystitis. A cystoscopic examination was unsatisfactory, on account of the thickening and ulceration of the bladder. The contents of the bladder amounted to only two ounces. From this time on frequent cystoscopic examinations were made, but none of them were satisfactory. The usual treatment of irrigation and the administration of urotropin brought about some improvement, but there was still a large amount of pus in the urine, although the pain was decidedly relieved, and, instead of being obliged to relieve herself every hour, she got along with three evacuations in a night and the contents of the bladder increased to six ounces.

About November 1st, a cystoscopic examination was made, and pus could be seen exuding from a point in the left posterior portion of the bladder when the ovary was pressed upon, although the exact site of the opening could not be found on account of the adjacent swelling.

Distending the bladder with the irrigating fluid

always gave her a severe pain in the left ovarian region.

The diagnosis was made of a bladder fistula communicating with the ovary.

On November 7th, a vesicovaginal fistula was made to secure drainage. A median incision was then made and this ovary containing an abscess was found, which could be partially emptied by pressure. After extensive adhesions were separated a pan-hysterectomy was made, removing sufficient of the left broad ligament to include the sinus, which passed through it. The fistulous opening in the bladder was closed with chromic gut, and a post-vaginal drain was inserted.

The patient has now no pain in urinating, and goes all night without emptying the bladder. The amount of pus has steadily decreased and is now very small.

The artificial vesicovaginal fistula healed spontaneously in five days. There has, at no time, been any evidence that any urine escaped posteriorly through the original fistula.

Microscopic examination of the wall of the ovarian abscess shows nothing but ordinary granulation tissue.

CASE 4.—The case is one of uterus didelphys. The patient was first seen by me on October 10, 1910. She is 16 years old; began to menstruate at 15; regular every four weeks; duration, seven days; amount, normal, with scarcely any pain. Immediately after the menses she had considerable severe pain, which lasted from one to three days. In the interval she has no pain. Last December she first noticed a swelling in the left pelvis, which has steadily increased in size. This is tender, but not painful. There are no rectal symptoms and no bladder symptoms, except frequency in urinating.

Physical Examination: There is one normal vulva and vagina. Encroaching upon the vagina is a fluctuating mass, which is not altered by emptying the bladder. This tumor extends above the umbilicus and evidently occupied the left pelvis, although encroaching upon the right so that the cervix cannot be reached per vaginam. The left kidney is not palpable. The right is enlarged and easily palpated. Realizing that this mass might be a tumor of a misplaced kidney, attention was directed to the settlement of this question by cystoscopy, and catheterization of the ureters or the use of the separator was impossible on account of the great distortion of the bladder by pressure of the tumor.

On October 13, 1910, a median incision was made. The left kidney was carefully sought for, but was absent. The right kidney was slightly enlarged. In the left lower lumbar region was a fluctuating mass covered by thickened peritoneum and adhesions. This proved to be a left ovary. To the lower side and to the right of this was another tumor like the former, but evidently a uterus, as shown by the position of the round ligament and tube. The tube was also very much distended. Beneath this and the bladder was a vagina filled with fluid estimated at one pint. These masses were all distended with dark fluid blood constituting hemato-oophoron, hematometra, hematosalpinx, hematokopos. It was estimated that the entire amount of blood in all these cavities was one quart. The walls of the vagina and uterus are one-half inch in thickness. This left vagina ended in a cul-de-sac close to the vulva. The left tube, ovary, and uterus and most of the vagina were removed, and the right

uterus and vagina sutured to the left broad ligament, and so brought into a normal position. About an inch of the left vagina could not be well dissected out, but was incised so as to open freely into the right vagina. The dissection of the vagina was extremely difficult, but finally accomplished without much loss of blood. The association of the absence of the left kidney and the imperfect development of the left side of the genital tract is of interest.

This beautiful specimen was put up in Kaiserling solution by Dr. F. L. Adair, and shows all the parts perfectly, except, of course, the removal of the blood has done away with the enormous distention.

The young woman is now in excellent health, and has had two normal menstruations since the operation.

Dr. A. T. Mann reported, briefly, a case of fibroid tumor of the uterus in a virgin which completely filled the pelvis.

Dr. C. H. Hunter reported having seen a case last week of bicornous uterus with pregnancy on one side.

Dr. A. E. Benjamin reported a case seen two months ago, in which an operation for appendicitis revealed a double uterus with but one vagina. It was also discovered that the woman had but one kidney.

Dr. A. Schwyzer referred to a case seen that morning in which a uterine fibroid in a young woman had taken on rapid growth so that the pressure had caused necrosis, and in time would, without doubt, give rise to the rosy flesh as seen in Dr. Abbott's case.

Dr. W. A. Dennis spoke of a case in which he had found a double vagina in a young girl. He had removed one by operation.

Dr. Frank C. Todd then gave a case report of the removal of a brass staple ticket-fastener from the bronchiole of a child through the bronchoscope. The child, two and a half years old, was first seen by him eleven days after the accident. It was noticed that the child breathed heavily, and it was supposed by the first physician called that it had diphtheria. A little later, however, another physician made a diagnosis of a foreign body in the bronchus.

The child was brought to the city where an x-ray picture was taken. This revealed nothing, however, because it had been assumed that the foreign body was a pin and that it was in the neighborhood of the larynx. Because of this the picture was taken too high, and therefore revealed nothing. The attempt was then made to use the bronchoscope, but the cyanosis was so deep and the condition so grave that it became necessary to make a tracheotomy at once. This was done by Dr. J. Warren Little, and the labored respiration was greatly relieved. It was

found that the trouble had been due largely to edema about the larynx.

The bronchoscope was then introduced under cocaine alone, and the foreign body was soon discovered in the right bronchiole. After some difficulty it was successfully removed. In the process of manipulating the instrument the alveolus about one of the incisor teeth was broken and the tooth turned outward. A nearby dentist was called, who replaced the tooth with its fragment of the process, and tied it to its fellows on either side.

Dr. J. E. Moore exhibited an x-ray picture of Lane's bone-plates which he had placed on an ununited fracture of the forearm six weeks before. There had been perfect coaptation, but fearing that the pressure might be too great he had loosened the screws; and the subsequent picture showed that the bones had moved from their former position. He therefore questioned the value of this method.

The Academy then listened to a joint illustrated paper, "Different Methods of Kidney Suturing," by Drs. J. E. Moore and J. Frank Corbett, of Minneapolis. The subject was discussed by Drs. Mowry of Rochester, A. Schwyzer of St. Paul, Abbott and Mullen of Minneapolis, and by Dr. Moore and Dr. Corbett in closing. The authors were accorded great credit for the original work accomplished and the advance in surgery which it indicates. The paper will be published in the *Annals of Surgery*. The following is an abstract of the paper:

From our experimental work done on the kidney to determine the amount of damage resulting from various suture methods, we draw the following conclusions:

First, that an operation on the kidney always destroys some kidney substance; second, that the section of the kidney does less harm than the suturing necessary to control hemorrhage; third, that suture of the capsule alone is not sufficient to control the hemorrhage, and is therefore dangerous; fourth, that mattress-sutures destroy a great deal of the kidney substance, and that the enlargement of the unoperated kidney after a short period of time is due to congestion from overwork and not to increased kidney substance, showing that the sum total of kidney substance is reduced by an operation; fifth, that the destruction of kidney substance extends far beyond the field of operation; sixth, that the functional activity of the operated kidney is somewhat reduced, and this resembles the finding in a contracted kidney from other causes; seventh, that interrupted sutures transfixing the kidney at the pyramidal line and tied around the body of the kidney, do the least damage, and is therefore the method to be recommended.

ARTHUR W. DUNNING, M. D., Secretary.

THE HENNEPIN COUNTY SOCIETY

The Society met on November 7th, with fifty-five present.

Dr. F. C. Todd presented a case of mastoid abscess in both ears in a boy eleven years of age. Dr. Todd told of the case of a child two and a half years old who suffered severely in breathing, and of the great difficulty experienced in locating the trouble, which, when removed, proved to be a tag used for fastening pieces of goods together. The child had swallowed it and it stuck in a bronchus.

Dr. Wold M. Duke, principal of the School for Stammerers, addressed the Society in reference to speech impediments and their cure, giving his own personal experience and bringing before the Society two boys and one lady who had attended his school for the purpose of being cured. The students read from a book to illustrate the course of instruction, and Mr. Duke gave a short sketch of each case.

The Board of Censors reported favorably on Dr. H. M. Blegen and Dr. Stanley R. Maxeiner, and they were elected to membership.

Dr. A. T. Mann reported that the Committee on Entertainment at the State Association meeting had on hand a balance of \$160.30. It was moved to put this amount into the Society's building fund.

Architect Fowler addressed the Society in reference to the cost of a building and a suitable place for the erection of such a building, suggesting Ninth Street and Mary Place as a proper location and stated that in his opinion the space for the building, and the building itself would cost about \$450,000.

Dr. A. S. Hamilton reported for the Committee on Sub-sections. The report was the substance of Dr. Hamilton's paper published in our issue of December 1st.

Dr. C. G. Weston read a paper on "The Technic of Primary Perineorrhaphy," and Dr. Fowler Avery read one on "The Treatment of Pneumonia." Both papers were discussed at considerable length.

C. H. BRADLEY, M. D., Secretary.

NEWS ITEMS

Dr. F. G. Watson has moved from Rushmore to Clarkfield.

Dr. A. J. Kaufman, of Yampa, Colo., has located in Hollingsford.

Dr. B. W. Dearborn has moved from Minneapolis to Vista Harmosa, Oaxca, Mexico.

Dr. James F. Stewart, a recent graduate of Toronto, has located at Stevensville, Mont.

Dr. Eugene Hultz, of Hill City, S. D., expects to locate in Colorado, and will move this month.

Dr. Howard Lankester, of St. Paul, has been appointed city health commissioner by Mayor Keller.

Dr. Clarke Gapen, the well-known alienist of Madison, Wis., died last month at the age of 60 years.

The Rapid City (S. D.) Hospital is building a twelve-room addition which is now practically completed.

Dr. E. E. Nussle, of Chippewa Falls, Wis., was married last month to Miss Jessie P. Cox, of St. Paul.

Dr. H. T. McGuigan, of Mazeppa, has become a member of the firm of Drs. Cremer & Haessly, of Red Wing.

Dr. Fitzgerald of Missoula, Mont., has gone to London to spend a year in the study of children's diseases.

The Sisters' Hospital of Deadwood, S. D., is contemplating the erection of a Nurses' Home during the current year.

Dr. Fred W. Schecher, a recent graduate of the College of Medicine and Surgery of Chicago, has located at St. Bonifacius.

Dr. Vern W. Embree, of Gayville, S. D., was married last month to Miss Christina M. Henriksen, of Sioux City, Iowa.

Dr. F. W. Burns has moved from Watson to Milan to become associated with his brother, Dr. W. A. Burns, of Milan.

Dr. R. A. Peterson, an Iowa physician, has located in Clarkfield. Dr. Peterson has been doing post-graduate work in Chicago.

Dr. E. A. Jackman, of Mohler, S. D., was operated upon last month for gall-stones at the Sisters' Hospital in Hot Springs, S. D.

Dr. W. S. Bently, of Hot Springs, recently re-elected to the state legislature, has left for Pierre to take up his duties as representative.

Dr. W. H. Vittum, of St. Paul, died suddenly last week at the age of 55 years. Dr. Vittum had practiced in St. Paul for twenty-five years.

Dr. B. S. Allison, of Oelrichs, S. D., has moved to Alliance, Nebraska. Dr. Menderson from the eastern part of North Dakota is now located in Oelrichs.

Dr. B. E. Wiley, who has been abroad doing eye, ear, nose and throat work, has located in Kalispell, Mont, and will make a specialty of the above line.

Dr. George Furstman, of Chicago, has been elected special health officer of La Crosse, Wis. He will devote his entire time to a fight against tuberculosis and contagious diseases.

Dr. J. B. Naftzger, of the firm of Walker, Geyerman & Naftzger, Hot Springs, S. D., will leave soon to continue post-graduate work on diseases of the eye, ear, nose, and throat.

St. Paul has granted a license for a sanitarium to be built on the river bank in that city by Drs. Arthur Sweeney and Haldor Sneve, of St. Paul, and Dr. W. A. Jones, of Minneapolis.

Dr. F. A. Spafford, of Flandreau, and Dr. W. E. Moore, of Sioux Falls, S. D., have recently given the State Medical College at Vermillion about two hundred books for its library.

Dr. Ralph St. J. Perry has located at Parkers Prairie. Dr. Perry formerly practiced at Farmington, and has been two years in the West Indies. Dr. Perry will reopen the hospital at that place.

Dr. J. M. Wheat, who practiced for a number of years in Minnesota and who served in the lower and upper houses of the state legislature for a dozen years, died in Redlands, Cal., last month.

Dr. Miller H. Pratt, of Stillwater, died last month at the age of 76 years. Dr. Pratt had practiced in Stillwater nearly forty years. He was a graduate of Michigan, and was a Civil War veteran.

The remains of the late Dr. Henry Hutchinson, who died in Algiers, Africa, on December 1st, reached St. Paul on Dec. 22d, and memorial services were held on the 23d. The body was sent to Faribault for interment.

Dr. F. F. Westbrook, Dean of the Medical Department of the State University, has resigned the office of director of the laboratories of the State Board of Health in order to have more time for his college work and for research work.

Dr. M. L. Head, of Hartland, has sold his practice and residence to Dr. A. V. Garlock,

who has been practicing for the past year at Wells. Dr. Head has practiced at Hartland nearly twenty years, and will now retire from practice.

Dr. W. A. Abbott, of Minneapolis, was elected president of the Western Surgical Association at its annual meeting held in Chicago last month. Dr. A. T. Mann, of Minneapolis, was re-elected secretary-treasurer of the Association.

A medical-practice act, drawn on somewhat new lines, will be presented before the legislature of North Dakota at an early day. The act requires that every practitioner shall have certain general educational requirements and pass an examination in diagnosis.

The Sixth District Medical Society of North Dakota held its annual meeting last month at Bismarck, N. D. The following officers were elected for the current year: President, Dr. A. M. Brandt, Bismarck; vice-president, Dr. Shipfer, Bismarck; secretary-treasurer, Dr. H. O. Altnow, Mandan.

Our readers will recall Dr. Lyng's letter from Vienna, which appeared in our issue of December 1st, on the wonderful new remedy for syphilis named "606." We understand that the H. K. Mulford Company will have a supply of "606" at its Minneapolis store about the 10th inst.

At the annual meeting of the Fourth District Medical Society of South Dakota, held at Pierre, S. D., last month, the following officers were elected: President, Dr. C. M. Hollister; vice-president, Dr. N. B. Gerhart; secretary-treasurer, Dr. J. M. Walsh.

A number of county societies are discussing the matter of charges for telephone consultation. The Hennepin County Society recommends the regular fee (\$2.00) for such consultations. Most of the members have been charging one dollar. Other societies have refused to take action.

The Inter-State Medical Journal of St. Louis devotes its January issue to the subject of syphilis. Some of the best writers and investigators at home and abroad contribute to the number. Dr. Wm. Osler contributes the opening paper, entitled "The Influence of Syphilis on Civilization." The issue is a very valuable one.

Dr. Joel E. Goldthwait, of Boston, read a paper last month before the Ramsey County Medical Society. Most of the members of the Hen-

nepin County Society were present as guests of the St. Paul Society. Dr. A. R. Colvin gave an elegant supper at the Town and Country Club in honor of Dr. Goldthwait, with a large number of guests present.

Dr. Winfield Scott Hall, of the Northwestern Medical School of Chicago, has been delivering a series of popular lectures in the Northwest on social purity and kindred questions. He has appeared before medical societies and clubs, Y. M. C. A. and Y. W. C. A. associations, church clubs, etc.; and his work has been highly commended and appreciated.

At the annual meeting of the Seventh Wisconsin District Medical Association, held at La Crosse, Wis., on Dec. 22d, the following were elected officers for 1911: President, Dr. E. H. Townsend, New Lisbon; vice-president, Dr. E. F. Christian, La Crosse; Secretary, Dr. C. H. Marquardt, La Crosse. Dr. E. C. Rosenow, of Chicago, read the principal paper before the Society.

A recent news item in the Fargo Forum from Devils Lake, N. D., says that 200 people were awaiting the representative of the "United Doctors" who appeared in that city after extensive advertising by the firm of "united" brethren. In the absence of a license to practice, the representative was not allowed to cure these people of diverse diseases. Let the "League of Medical Freedom" take notice.

Dr. D. S. Cummings, of Waseca, died last month at the age of 60 years. Dr. Cummings came to the state in 1856. He served as mayor of Waseca for six terms, was on the board of education for twenty-five years, and was county superintendent of schools for two terms. At the time of his death he was a member of the governing board of the State School for the Indigent at Owatonna.

The Mitchell (S. D.) Medical Association held its annual meeting last month at Mitchell, S. D. Papers were read by Drs. J. F. Howard, C. A. Coman, B. A. Bobb, E. F. Reamer, C. A. Bower, and F. W. Freyberg. Officers were elected as follows: President, Dr. E. W. Jones, Mt. Vernon; vice-president, Dr. E. F. Reamer, Mitchell; secretary, Dr. W. R. Ball, Mitchell; treasurer, Dr. B. A. Bobb, Mitchell.

The Minneapolis Board of Education has authorized the inspector, Dr. C. H. Keene, to go forward with school inspection. The following physicians and nurses have been assigned to the work: Drs. M. W. H. Bockman, George Cutts,

James W. George, Stanley E. Kerrick, Margaret L. Nickerson, and F. W. Schultz; nurses, Marie L. Mitchell, Josephine E. Nelson, Margaret Stoltenberg, and Flora M. Thompson.

Dr. W. H. Darling has been appointed medical director of The Sanatorium at Hudson, Wis., to fill the vacancy made by the resignation of Dr. E. B. Bradford, who will do post-graduate work abroad. Dr. Darling was assistant superintendent of the St. Peter Hospital for nine years, and he spent a year and a half in post-graduate work at Vienna, and several months in the hospitals of London and Berlin, specializing in nervous and mental diseases. Dr. Darling goes in a well-established institution, founded in 1866, and he carries to his new work large experience and training.

The Minnesota Valley Medical Association celebrated its thirtieth anniversary last month by holding a joint meeting with the Southern Association at Mankato. Dr. E. J. Davis, now stationed at the State Soldiers' Home, at Minnehaha, gave a reminiscent talk on the Minnesota Valley Association, and Dr. W. A. Adams, of Elgin, gave a like talk on the Southern Association. Papers were read by Drs. Bell and Erdman of Minneapolis; Drs. Gilfillan and Riggs of St. Paul, and Drs. Balfour and Selby of Rochester. The question of merging the two associations went over to the May meeting.

SPECIAL MEETING OF THE LEGISLATIVE COMMITTEE

Dr. Beebe has called a special meeting of the Legislative Committee of the State Medical Association at the Minnesota Club, St. Paul, at 8 p. m., Thursday, Jan. 5th.

[Notice.—A physician who offers his practice for sale through these columns is entitled to full information concerning an applicant, and unless this is given a reply may not be received, because a physician who sells the good-will of his practice is in duty bound to sell to a man worthy the confidence of his former patients, and to no other man will he make known his intention of changing his location.]

UNUSUAL OPENING FOR SCANDINAVIAN PHYSICIAN

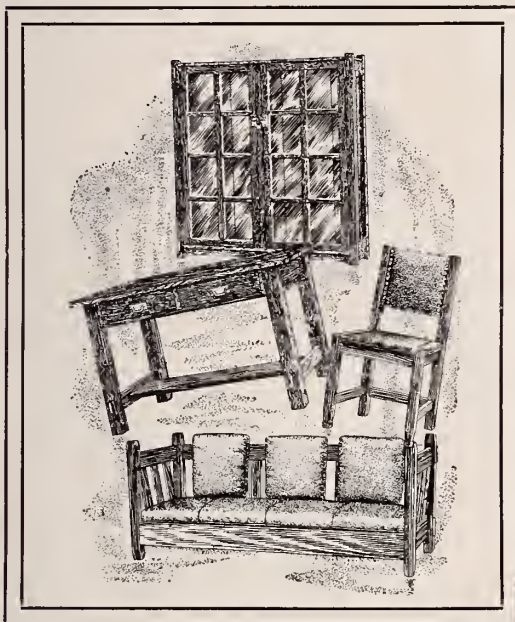
A Scandinavian physician is wanted to take a lucrative and very desirable practice in one of the most beautiful cities of Minnesota; about four hours from the Twin Cities; a large tourist resort. Physician leaves for good reasons, and makes no charge for his practice. He simply wants a good man to succeed him. Address S. L. A., care of this office.

INSTRUMENT-CABINET AND CHAIR WANTED

I want to buy a plate-glass, white-enamelled instrument-cabinet and a chair for nose and throat work. Give description and price. Address S. S., care of this office.

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PUBLISHER'S DEPARTMENT

A TRIUMPH IN PILL-MAKING

Parke, Davis & Co. confess that their soft-mass pill, which is now receiving so much favorable attention from the medical world, was for a long time a "hard nut" to crack. They had set out to produce by the soft-mass process a pill that should be a credit to their house and to manufacturing pharmacy. The task at first seemed simple enough. Here, as elsewhere, theory and practice were at variance. As a matter of fact, a good deal of experimentation had to be done. Time was consumed. Money was expended. In the end, of course, ingenuity triumphed.

In structure the soft-mass pill, as manufactured by Parke, Davis & Co., consists of a plastic mass encompassed by a thin, soluble chocolate coating. It may be flattened between the thumb and finger like a piece of putty. An important advantage of the soft-mass pill is the readiness with which it dissolves or disintegrates in the digestive tract. Another commendable feature is that, no heat being applied in the process, such volatile substances as camphor, the valerianates, the essential oils, etc., are not dissipated, so that any pill embodying one or more of these substances may be depended upon to contain just what the label says it contains.

Parke, Davis & Co. are putting out close to thirty formulas by the soft-mass process—all of them listed, we believe, in advertisements now appearing quite generally in the medical press. Practitioners under whose eyes these announcements do not happen to fall may profitably write the company, at its home offices in Detroit, for a copy of a recently issued folder on "Soft-Mass Pills," which contains titles and complete formulas of all the pills now manufactured by Parke Davis & Co. under the process referred to, together with some other important information.

THE NEW ABDOMINAL SUPPORTER-BAND-AGE

It is said that "a prophet is not without honor save in his own country," or, in our every-day parlance, one is usually better thought of away from home!

Doctor Katherine L. Storm, of Philadelphia—the designer of the best abdominal supporter-bandage—is an exception! Not long since we visited her office, and saw an order-list longer than your arm. In that list we happened to note a few pretty decent Philadelphia names, as for example, Beates, Daland, Deaver, Fussel, Hirst, Musser, etc. Evidently they think fairly well of Doctor Storm's bandage even in Philadelphia or else such names wouldn't have been on that list.

What is good enough for them surely ought to be of some help to you. Why not look into this and see why the best physicians and surgeons in the country are daily prescribing the Storm supporter.—Physiologic Therapeutics, November, 1910.

GENERAL ANESTHESIA

"Ethyl Chloride (Kelene) has now been in constantly increasing use in general hospitals for nearly four years, in general anesthesia, largely as adjuvant to ether and chloroform, the method of administration being by inhalation, the drug being sprayed on a mask covered by a number of layers of gauze, until the patient loses consciousness.

"The exponents of this method claim that greater safety is obtained, as the various stages of anesthesia can be better followed, than when a rapid induction compresses the different stages into fifty or sixty seconds, making it almost impossible to differentiate them.

"As an adjuvant before the use of ether or chloroform it fills a gap in the armamentarium of the anesthetist between the light and brief anesthesia of nitrous oxide and the deep narcosis of chloroform and ether."

For spraying, no apparatus equals the Glass Automatic Spraying Tube, of Fries Bros., 92 Reade St., N. Y., with "Kelene" (pure chloride of Ethyl).

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Chloral hydrateGrains XX
Petroleum 5i
Antheol 5i

M. et sig:—

To be applied at night; the head covered with a loose cap to prevent soiling the pillow. Wash off with soap and water in the morning.—F. S. Mason.

ACUTE NASAL CATARRH

Elmer Sothoron, M. D., Washington, D. C.

About six months ago a girl of 17 consulted me relative to an acute attack of nasal catarrh from which she had suffered for several weeks. As was my custom I sent her to the leading nose and throat specialists of this city.

After several weeks the girl returned to my office in company with her mother. She complained that her condition had grown steadily worse, that when she "blew her nose" there was considerable hemorrhage from the membranes. When I examined her nose I found both the anterior and posterior nasal passages inflamed and raw. The membranes were so badly swollen that the passage was completely closed up. I explained to the mother that in sending her daughter to the specialist I had done the best I knew how.

I had a sample bottle of Glyco-Thymoline on hand and knowing it to be a powerful deodorizing agent and the discharge from the girl's nose being so very offensive, I gave her the sample of Glyco-Thymoline, also a K. & O. Douche and instructed her to use a 50 per cent solution in the nose four times daily but held out to her no hopes of a cure.

Within about two weeks the girl returned to my office and upon examining the nose I found the entire passage to be in a normal condition. Glyco-Thymoline had done the work unaided and beyond my most sanguine expectations. I expected a palliative treatment and a curative effect was obtained.

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- (3) Gives compression, and Brass cylinder cuts out secondary ray, etc. For the physician using X-Ray, this is one of the "Rarest of Bargains" ever offered. Price, complete as illustrated, \$50.00. Write us for further details regarding our Radio-graphic machine constructed without an interrupter. Built for the Specialist.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, JANUARY, 15, 1911

No. 2

ESOPHAGOSCOPY AND BRONCHOSCOPY, WITH SPECIAL REFERENCE TO THE REMOVAL OF FOREIGN BODIES*

By ARNOLD SCHWYZER, M. D.

ST. PAUL

If we overlook the first incomplete and rather futile work of several men, it is Mikulicz who gave us the esophagoscope. He was the first one to use straight tubes and direct illumination. He thus made esophagoscopy a practical and practicable method, and repeatedly called attention to its importance and value. It is surprising how very meager the literature on this subject was in the earlier years and how Mikulicz's articles again and again had to stir up interest.

I will not mention historical points any further, except to say that Stoerck, von Hacker, Rosenheim, and Kelling are the authorities who then principally occupied themselves with the subject.

Mikulicz used a tube of 12-13 mm. in diameter, which is inserted with an obturator until it has entered the esophagus. After this the obturator is removed and the open tube, which is cut off obliquely at its lower end, is pushed forward under the guidance of the eye. The illumination is brought about by the attachment of Casper's panelectroscope to the esophagoscope. This panelectroscope is a handle which contains a covered electric lamp, from which the light is thrown by a mirror down into the esophagoscope. As in late years it has become an important point to simplify our instrumentarium, where it can be done without harm, I simply use Killian's bronchoscopic instruments for esophagoscopic purposes. These tubes, with which we can explore and inspect the trachea and the

bronchi, can very nicely be used for esophagoscopy. The guide to facilitate the introduction of the tubes, consists of a short tubal piece from which two blades originate. These are in their shape like long cut-out strips of a tube. (See Fig. 1).

Their free ends touch each other so that the whole shape of the instrument appears conic. The introduction into the esophagus of this guide, which was originally devised for the larynx, is thus easy and it can nicely be pushed beyond the cricoid cartilage. In the beginning of my work I never used this guide, but managed to insert the open tube into the esophagus by the simple guidance of the eye. The epiglottis first appears, and it is cleared by passing more or less to one side of it, down along one of the pyriform sinuses. One or both arytenoid cartilages come into view. With the open tube it needed some pressure sideways to clear them; then a little advancing of the tube, and the cricoid is cleared, which means free and easy further advance into the esophagus, whose lumen we find wide open. Of late when no difficulty is expected at the entrance to the esophagus I have always used Killian's guide. The introduction is thus very much easier, and, as repeated introduction (in the same patient) of an open tube would produce abrasions, less painful. If we follow the vertebral column and guide the instrument with the finger, the introduction is rather simple. I do not mean "simple for the specialist," but simple for any reasonably dexterous surgeon. In this country you usually see an esophagoscope which is, like an electric urethroscope, inserted with or without a plug in it, and has the lamp in the far end.

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

The light is not in a separate chamber, and because the cases are usually such that the esophagus often contains slime, saliva, food particles, and regurgitated stomach-contents, I think the light from the outer opening is more desirable. Stoerck and Kelling had constructed flexible tubes which can be straightened after insertion.

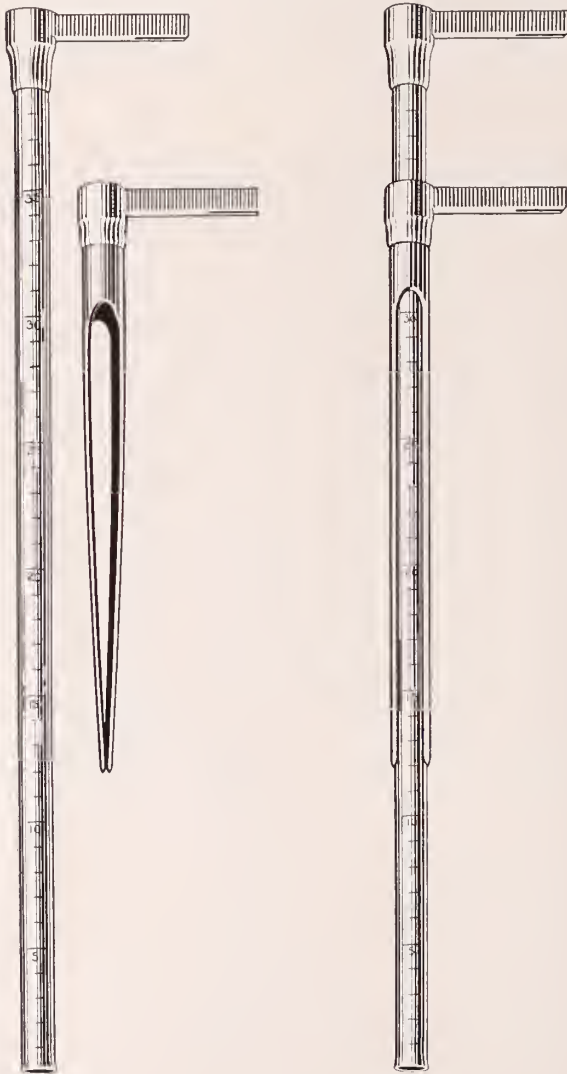


Fig. 1.

My first examinations were made without a guide for introduction and without Casper's handle, but simply with an open tube and a laryngoscopic forehead reflector. I mention this to show that we can get along, if necessary, with home-made tools; and this again brings the whole method nearer to those of us who formerly might have considered it a somewhat horrid, dangerous, or very difficult procedure. Esophagoscopy must become, even if not popularly

practiced, at least more popularly known. I should not think I was doing the right and proper thing today if I tried to dislodge or extract a foreign body from the esophagus, especially if of irregular shape, without direct inspection. Poking around in the dark ought to become a thing of the past.

If a foreign body be located in the entrance to the esophagus the insertion of an open tube, instead of one with an obturator, is preferable, because it allows us to inspect everything, while we are cautiously advancing toward the foreign body.

If a carcinoma is located in this portion of the esophagus, perforation, which, for instance, occurred twice to Mikulicz in his approximately 400 examinations (Gottstein, *Mittheilgn. aus d. Grenzgeb.* Bd. 6, p. 589) would probably be more easily avoided. Both perforations happened in Mikulicz's earlier work and in carcinomata located behind the cricoid cartilage. Since that Mikulicz avoided using his esophagoscope in carcinomata in this location, or used it only with the utmost care.

As to the technic: I shall mention only that the patient can be examined either sitting upright or lying in the dorsal position (v. Hacker and Rosenheim) or the lateral position (Mikulicz). In the latter the saliva can run out of the mouth. I use a simple table with two pillows under the shoulders. The saliva runs into the nasopharynx. I usually give a hypodermic injection of atropin, 1-100 or 1-50 grain, 15 or 30 minutes before inserting the tubes. This reduces the secretion very much.

Mikulicz cocaineized, with a 10 per cent solution, the mouth, the pharynx, and the entrance to the esophagus. A 4 per cent solution for the pharynx alone was sufficient in my cases.

The patient takes much comfort from an unconditional promise to remove the tube at a given motion from his hand. The head of the patient is best bent to one side and far enough so that a straight course down the neck is given the instrument, which is inserted in one angle of the mouth; otherwise it has a tendency to poke against the opposite side when it reaches the entrance of the esophagus. Sometimes in inserting the tube the teeth give great difficulty. In other cases a bulky tongue, a strong action of the inferior constrictor pharyngis muscle, or a marked anterior convexity of the cervical spine is troublesome.

In examining the esophagus we are struck by the patency of the whole thoracic portion.

Through the elasticity of the lungs, a negative pressure is produced in the pleura and transmitted to the other thoracic organs. We often can see down the esophagus quite a distance beyond the end of the tube. When the patient presses hard, the esophagus closes, because this negative intrathoracic pressure is then overcome by a positive one.

So many conditions in the lumen or the wall of the esophagus or even extra-esophageal ones (diverticula, ulcers, tumors, cardiospasm, aneurysms, etc.) exist where esophagoscopy is of great value diagnostically or therapeutically, that it would lead me too far if I tried to consider them all.

As an example I will mention the case of a man who came to me in January, 1905, in a most pitiable condition. For one week previously, only thin broth could be swallowed and for the last two days not even water. Even the finest esophageal sounds could not be passed beyond a point about six cm. above the cardiac end of the stomach. With the esophagoscope we found a strictured hard area at the place mentioned with raw hard edges, an ulcerated stricturing carcinoma of the lower end of the esophagus.

Fine silver-wire sounds could now be passed into the stomach with slight pressure. The stricture was about six cm. long. Unless one saw the narrow crater the probes would invariably be caught at the side of it. Dilatation then followed with gradually increasing sizes of the sounds, partly of olive shape. The effect upon the patient was marvelous. Even with what seemed to us a small opening he began to eat soft food to his heart's content and soon smilingly reported that he stole a piece of meat from his neighboring patient at the hospital, after which he was allowed to try all kinds of food.

Within three weeks he gained twenty-six pounds. In order to do as much as possible beyond a simple palliative measure, and to give the patient all possible chances and at least some reasonable hope, we started to use radium. A glass tube containing radium bromide (of 7,000 activity) was sewed into a piece of linen, and the whole was fastened to a silk thread. It was attached to the end of a sound and inserted into the crater. It was allowed to remain there up to thirty minutes at a time. After a few months (in May, 1905) the patient was better in appearance, weight, strength, and mental condition. Not even then, however, could I insert a tube or probe without the use of the esophagoscope. I

imagine it did not find the hard rigid area, but got caught against a portion outside of this hard ring. This patient then felt so well for a long time that he thought he was cured, and notwithstanding my urging him to come at intervals to see me he did not show up any more. His difficulty re-appeared later, and he died about a year after his first visit to me. The radium had evidently not delayed his end in an appreciable way. Perhaps this was due to its low activity. I now possess some radium that is about 250 times more powerful, and I have allowed it to remain in situ up to nine hours.

Of the foreign bodies in the upper food-passages the greater number become lodged in the lower pharynx and the entrance to the esophagus. Before doing anything a careful examination with the laryngoscopic mirror must first be done. The pyriform sinuses at the sides of the larynx must especially be well examined. A body can there be grasped under the guidance of the mirror or the finger with a pharynx forceps, of which it is best to have two, one grasping sideways and one anteroposteriorly.

When the foreign body cannot be seen or felt on account of its too low position, the older instruments, which work in the dark, are more or less dangerous, even if they are handled behind the Roentgen screen. They cannot compare with the esophagoscopic removal. Just let me mention two cases for comparison, both operated upon at St. Joseph's Hospital.

An elderly lady came to me with the fear that a bone had lodged in her "throat." Coughing produced more pain than swallowing of liquids. Laryngoscopically, nothing could be seen. She located the pain on the back in the middle line over the second dorsal spinous process. Pressure into the jugulum on the right side was distinctly painful. It was interesting that the patient when brought to the operating-room became so nervous that her pains had gone, and she assured me vividly that the body must have slipped down. I preferred, however, to make sure of it by inspection. With the above-mentioned bronchoscopic tube of largest caliber and eighteen cm. in length the lower pharynx was explored, and after this the esophagus was entered. The bone was readily found in the latter, and, though it was solidly fixed in the esophagus, lying horizontally and having the ends deeply engaged into the mucosa, the removal was easy and safe. The bone was the thickness of a match and two cm. long. Both ends were very pointed. With any kind of a sound we should have done

much harm and might have had the same end as in the following case:

In this case, also a lady, a sound was introduced by a doctor in search of a foreign body and in the hope of dislodging it. Its nature, size, and shape were not definitely known. Such manipulations are at best only justifiable if one is sure of the favorable blunt form of the foreign body. The result was, first, apparently better permeability though with pain; then a swelling, as I was told, occurred in the posterior wall of the pharynx. After some days, though the fever and general condition became worse, this swelling promptly became less. When I first saw the patient she was in extremis from sepsis. I found a flabbily, fluctuating retropharyngeal abscess low down. The flabby condition with the given history made it plain that an abscess in the retropharyngeal and uppermost retro-esophageal space had found its way into the posterior mediastinum. Expecting large quantities of pus from there, we put the almost pulseless patient in an exaggerated Trendelenburg position and incised the abscess by mouth, but she died then and there, though there was no aspiration of the abundant pus.

These two cases speak plainly enough for themselves to make further comments unnecessary.

Among the foreign bodies in the esophagus artificial tooth-plates form a large percentage, about one-third of all the foreign bodies. They are mostly of very irregular shape, and their removal, even in the laryngoscope may be impossible on account of hooks and sharp corners. Makkas, in Garré's clinic, saw three cases and found nine more in the literature, where extraction of tooth-plates has been impossible, even with the use of the esophagoscope and in which an esophagotomy had become necessary. He then constructed an exceptionally strong esophageal cutting forceps (*Beitr. z. kl. Chir.*, 1908, Bd. 57., Heft 1), which I show you here. With this instrument we can cut such a plate into pieces for removal.

There exist a number of special instruments for the extraction of different kinds of foreign bodies. Dr. Lerche of St. Paul has been especially successful in designing some of these.

In babies the finger can reach down to the entrance of the esophagus, where in one case I was able to grasp a 5-cent piece with a forceps under the guidance of the forefinger, though its upper edge was on a level with the lower border of the cricoid cartilage. In a second case the

foreign body, also a nickel, had so firmly been wedged into the uppermost esophagus that the forceps would not dislodge it. Graefe's coin-catcher, which I show you here, would have been much too bulky. In this case we made a small incision in the neck, and when we were down upon the esophagus we could dislodge the nickel by digital pressure into the oral cavity without opening the lumen of the esophagus.

In going over to bronchoscopy let me briefly show you the instrumentarium advised by the originator of this method, Prof. Killian of Freiburg, Germany. Besides different calibers you see tubes of different length. The trachea and bronchi can be moved about surprisingly well, and thus the bronchus, which we want to enter, can be easily brought in line with the tube. The only exceptions are the uppermost secondary bronchi. Cocaine applied into the bronchi with a swab keeps the patients from too much coughing. The dyspnea is much less than you would expect, because the patient breathes alongside and through the tube. The later bronchoscopes have side-openings to further facilitate breathing. The bronchoscopy can be done directly through the mouth and larynx (upper bronchoscopy) or through a tracheotomy opening (inferior bronchoscopy), which facilitates things greatly, if we are not experts. A suction-pump is desirable. Some sponge-holders and a number of forceps of different designs are necessary. Some of these forceps can be entered, for instance, into a broken-off and aspirated tracheotomy-canula, and they grasp it by the spreading of its roughened branches; others are smooth or hooked ordinary grasping forceps, etc.

In January, 1904, I published in the *Annals of Surgery* my first two cases of foreign bodies in the bronchial system. In the case of an adult a piece of bone with sharp edges was removed under cocaine from a secondary bronchus of the lower lobe of the right lung. We had to go fifteen cm. below the upper border of the sternum, or eighteen cm. below the tracheotomy-opening.

In searching for the foreign body we could nicely see the difference in the appearance of the left pale unaffected bronchial tree and the right side, where purulent secretion was troublesome but indicative. A large goiter had made the bronchoscopy through the mouth impossible, and two weeks after removing the goitre we explored and extracted the bone through a tracheotomy-opening.

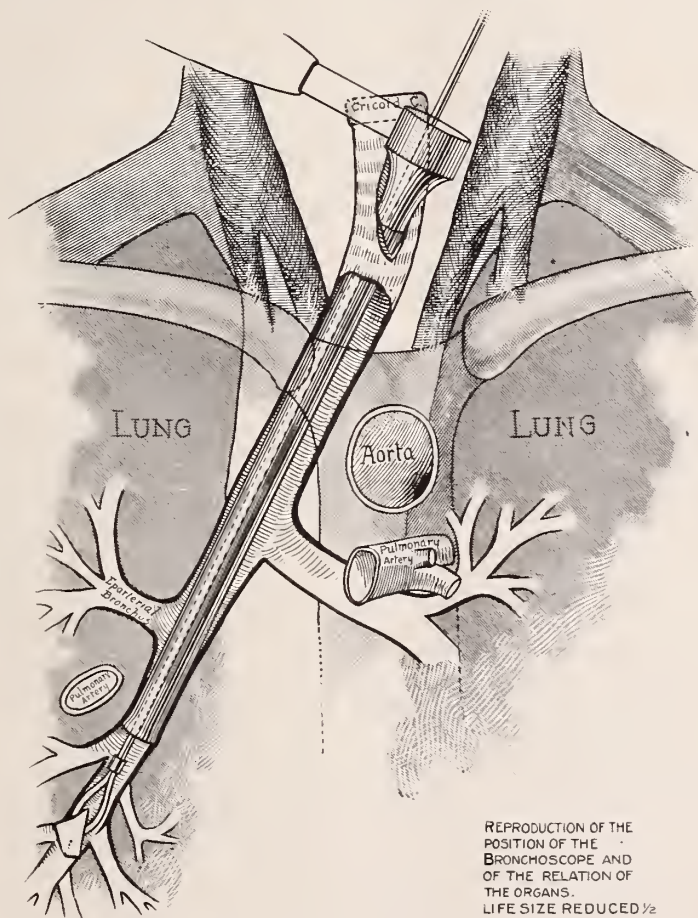
In a more recent case we had the most beauti-

ful clinical picture of a foreign body impacted in the right main bronchus. It was a child, 2 years



Fig. 2.

of coughing, some dyspnea, restlessness, and fever about 100°. The whole right side of the chest gave a dull tympanitic sound. The dullness of it was surprisingly pronounced. On this side there was practically no breathing sound, while the breathing on the other side was loud and normal. It was very striking to see the right side of the thorax practically immovable, while the left side made its wide respiratory excursions. We made a horizontal incision of about 3 cm. in the sternal notch. I will say that cosmetically the horizontal skin incision is infinitely superior to the generally used vertical one. All my bronchoscopic tubes had too large a diameter. With a urethroscope we entered the trachea down to the bifurcation and then saw a white body in the right bronchus. In tilting the tube the right bronchus entered more into our field of vision and a tiny hook, pushed back of the tightly fixed



REPRODUCTION OF THE POSITION OF THE BRONCHOSCOPE AND OF THE RELATION OF THE ORGANS. LIFE SIZE REDUCED 1/2

Fig. 3.

old, which had been playing with beans and then suddenly became cyanotic and coughing. The parents at once suspected a foreign body. When I saw the child, there was a moderate amount

bean, dislodged and held it. Urethroscope and bean were removed together, as the latter would have been too large for our tube to pass through it. After the operation, as in all the cases, tinc-

ture of benzoïn inhalations were given for several days at intervals of 2 hours 10 to 12 minutes at a time. No tracheal canula was ever used. This last mentioned case was discharged 4 days after the operation with the wound practically closed. A scar is hardly to be seen. The horizontal incision gives just as good view and avoids the lasting ugly marks. I have used this horizontal incision in other cases of tracheotomy, and in a recent case of cricotracheotomy where in a baby a large piece of an eggshell was removed from between the vocal chords the horizontal scar is practically invisible.

DISCUSSION

Dr. Wilhelm Lerche, (St. Paul): A discussion of Dr. Schwyzer's excellent paper will mainly be to emphasize what he has said. The bronchoscope and esophagoscope is a *sine qua non* in these cases, because the best result is obtained with the least discomfort and danger to the patient.

To resort to esophagotomy where esophagoscopy can be carried out successfully is, in my opinion, not justified, because it has a considerable mortality. Prior to the year 1880 the mortality in esophagotomy for foreign bodies was 26.5%; from 1880 to 1890, 27.8%; from 1890 to 1900, 17.8%; from 1900 to 1903, 12.6%.

No instrument, except the esophagoscope, should be introduced in case of a foreign body in the esophagus, and this instrument must be introduced without an obturator under the guidance of the eye, for obvious reasons.

I wish particularly to call attention to the necessity of promptly removing sharp foreign bodies from the esophagus, to prevent perforation.

In order to ascertain the fate of swallowed foreign bodies I have collected 200 cases since 1900. The mortality was 12.5%. In 11.5% the esophagus was the seat of perforation. Pieces of bone were the cause in 9 cases; pins and needles, in 4 cases; fishbone, in 2 cases.

In 48 of the cases the esophagoscope was used without a death, except in a case where attempts at extraction with the probang had caused perforation.

If an abscess has formed in the cervical part and is situated periesophageally, the use of the esophagoscope is contra-indicated. The abscess must be approached from without.

If the abscess is in the thoracic part, without involvement of the cervical part, the esophagoscope is indicated, to ascertain on which side the abscess is located.

I have personally had a number of cases in which I have removed foreign bodies from the esophagus, by the aid of the esophagoscope, without a death.

We must not wait and trust to luck or to the probang in these cases.

Dr. Frank C. Todd (Minneapolis): Dr. Schwyzer and Dr. Lerche have both sufficiently emphasized the

fact that this is the only practical way to get at this particular class of cases if you do not wish to do the work blindly. Dr. Schwyzer very modestly states that he is not an expert in this work after having shown us some cases which demonstrate great expertness, and I believe he was the first man in this state to do any of this work.

The little experience I have had with this work teaches me that it is necessary to be well equipped with instruments for removing different kinds of foreign bodies, although, as Dr. Lerche has said, these different kinds of foreign bodies cannot well be classified, but such things as safety-pins in the esophagus and breathing apparatus are not uncommon, and such things as nickels and buttons may be classed together. I have found it difficult to use forceps in the removal of foreign bodies because of the fact that when the foreign body is tightly fastened the instrument has too long a shank and has not a good grasp. I was very much interested in Dr. Lerche's instrument for the removal of these foreign bodies. I have devised a few myself to get around this difficulty in the use of forceps, i. e., the insufficiency of the grasp. For instance, I have gotten out an instrument made of a loop bent on itself, in different sizes, which will pick up a nickel or a button, and it can be used without forceps. Also a hook with a bulb on the end, which is so arranged that it will not injure the lining membrane.

Dr. Pratt is here, and I believe it would be interesting to hear from him. He has just spent some time with Dr. Jackson of Pittsburg who has done more work of that kind than any other man in the country.

Dr. J. A. Pratt (Aurora, Ill.): I have had the pleasure this summer of working for a short time with Dr. Jackson of Pittsburg, and also examining a number of his cases. Of course, when one sees a man like Dr. Jackson do this work it seems very simple. He predicts the use of the bronchoscope as commonly as we use the speculum, and that we shall be able to pass the bronchoscope and go down and make an inspection with the purpose of removing the foreign body.

In reference to ulcers and diseased conditions, he recommends this instrument highly and says it should be looked into by more men, and if they do so they will soon learn the method of passing this instrument and will use it in their work. He has devised a great many instruments for doing this kind of work.

It was a great pleasure for me to meet Dr. Jackson. He was very courteous, and I think he would be very glad to have anyone spend some time with him.

Dr. Arnold Schwyzer (Essayist): I do not know that I have very much to say in closing the discussion. I have done a good deal of esophagoscopy in my practice, but I have gotten along and used only the esophagoscope as an instrument. I had the other instrument for a long while and did not use it because I had good use from the esophagoscope and got along first rate.

ECONOMICS OF THE PURE MILK QUESTION*

BY JOHN LEE COULTER, PH. D.

Assistant Professor of Rural Economics, University of Minnesota
MINNEAPOLIS

At last, after many generations of log-rolling and haphazard guessing biased by the presence of interested parties, we are to have a national tariff commission. *Ultimate consumers*, or their spokesmen, have been maintaining that the mass of manufacturers have been charging exorbitant prices for the goods they produce and offer for sale. They say that this is possible because of the tariff. And now, having found the evil and the cure, we are to have a commission. The whole purpose of this commission is to see that justice is done as between producers (manufacturers) and these ultimate consumers. We all want the producers to secure a reasonable profit, but do not want them to exploit us. *The commission, then, is to look after the purse-strings of the consumer.*

These same ultimate consumers, or their spokesmen, have been maintaining that the mass of manufacturers have gotten into the habit of using diseased, rotten, or defective raw-material and of adding preservatives and adulterants, in order that they may be able to get rid of the goods they manufacture. The ultimate consumers object to this and have demanded and are getting pure-food laws. And now *pure-food commissions are being created to look after the health of the consumers.*

These two steps show that society is advancing,—that ultimate consumers, if you please, are demanding that their *health and their purses be protected.*

Now, these same ultimate consumers have use for milk, cream, butter, and cheese. These products are as truly manufactured as are boots and shoes or canned goods, even though the manufacturers are sometimes called farmers or dairymen. We are just beginning to see that careful and decisive steps must here be taken, because both the health and purse are being seriously affected. Indeed, the time has already arrived for concerted action, and a platform should be outlined.

The first demand of the consumer is that he must be supplied with a product which tastes and smells good. This is a good rule, but very general and only of primary effectiveness. It Before the pure-food laws it was the only rule

is the first step. Each consumer can enforce it, in that field. But dairy products may be of very low grade and yet be eliminated by this test.

The second demand of consumers is that they shall not be deceived in the quantity of goods purchased. But because they cannot have scales and measures at hand all of the time they have passed laws providing for officials of "weights and measures" to keep watch and prosecute for them.

The third demand is that these dairy products shall not be treated with preservatives or be adulterated. This is much the same attitude as is taken toward all food, and pure-food laws should apply.

The fourth demand is that the price shall not be too high. Here many false ideas of economy prevail. Consumers, I speak now of the mass of consumers, really want pure milk. I personally interviewed over 200 representative housewives in one of our cities during the last year and found that the sentiment for pure dairy products is very strong. But these same people have little or no idea of the cost of producing sanitary milk as compared with dirty or unsanitary milk, and are "reasonably well satisfied" if "any lurking germs" are killed by pasteurizing or by some other process. When you tell them that if they would be willing to pay as much for clean natural milk as they now do for pasteurized they are pleased, but continue to buy the pasteurized variety.

Here, then, is the entering wedge in a great campaign. The campaign must be waged among producers and consumers. First, the producers must be shown that the consumers now want not only full measure and full weight at a fair price, but a sanitary milk. They must be shown that so insistent are consumers that they are spending tens of thousands of dollars pasteurizing and otherwise treating milk in order to make it reasonably satisfactory.

These dairymen and farmers must be further shown that if they would spend as much money in producing sanitary milk as is now used by the consumers to make it usable they would be rewarded by higher prices in proportion to their efforts. In order to carry on this campaign, the State, which is the entire mass of ultimate consumers, should supply the educators. The State

*Read before the Minnesota State Sanitary Conference, at Minneapolis, Oct. 4, 1910.

now supplies teachers to show the farmer and dairymen how to produce *more* milk and *richer* milk. How much more important is it to produce *purser* milk. Just as cow-testing clubs are being organized in many districts to test cows for quantity of milk, so there must be clubs to work for the production of sanitary milk.

This work really comes under several lines of activity. In order to have such milk as the public demands the public must see to it that the dairy cows have the best of health. States and the Nation spend hundreds of thousands of dollars getting rid of cattle ticks, or getting an extra blade of grass to grow. This should be kept up; but the State should also see that the health of the people must be preserved, and that as a first step all cows (the source of a food supply) must stand a health-test. And the States should likewise stand ready to purchase at its full normal value any animal which cannot stand the test, and dispose of the animal in the most advantageous way to secure a return of as much of the purchase price as possible. In a decade this State could place itself in the forefront in this movement. Of course, importation of cattle would have to be closely watched.

The second step must be in the direction of popular education of the manufacturer (the farmer and dairymen). Those who wish to do what is right must be helped; the same as a child who wants to learn to write must be shown how. But education for the mass of sensible producers must be supplemented by laws for the prosecution of those who refuse to live up to a certain standard, the same as in the case of our pure-food laws.

If good milk is produced, the rest is comparatively easy. But the writer, because he has lived for many years on Minnesota farms, because during the last year he visited the barns of a great number of farmers and dairymen and discussed the question with the producers, and because he has made a series of very careful estimates of the cost, is confirmed in these views, first, that the consumers must make insistent demand for a better product or they will not soon get it; second, that they must show their desire for it by being willing (by passing laws and by being taxed to supply the money) to help to get rid of the undesirable cows; third, that they must show their desire by carrying on a movement of education among the producers who do not understand, and by prosecuting those who persist in dirty methods.

If consumers really want sanitary milk, one of the first moves would be to see that the stables kept by hospitals are sanitary. This is surely as important as carrying flowers to the patients; yet the writer has visited such stables and has found some as bad as that of many dairymen.

If they really want sanitary milk, another early step is to clean up the stables behind their own houses in the cities. As a general thing these stables, with one, two, or three cows, are in a worse condition than is found in the average dairy or farm.

If those who do not keep cows want sanitary milk, let groups of twenty-five or fifty in a locality agree to pay a cent a quart higher to some dairyman if he will improve his quality, and let them send their own inspector out from time to time. A few months would show the wisdom of this step. Or, again, if they want this good milk, let one hundred families purchase or establish a small dairy to supply their needs. If they would establish a clean dairy (I do not mean that they must plan to brush the cow's teeth each morning) they could easily dispose of the surplus milk at a profit. I only want to make this clear, that when consumers get rid of their false notions of economy, when they demand sanitary milk, they can get it for what it costs, including such a profit as is now added.

I cannot emphasize too strongly this point, that many farmers would be glad to produce more sanitary milk, to introduce cleaner methods, and to be surer of the health of their cows, if the consumers only appreciated what it meant. But the consumer must be willing to pay for a better product. No farmer or dairyman can introduce these reforms and compete with another who does not go to any extra expense.

In conclusion, I would urge that the demand must come from those who use the dairy products. Just as they have demanded pure-food laws and other reforms and have commenced to get results and are paying for them, so, too, they must demand not only good weight and measure, and no adulteration, but also a product from a healthy cow secured according to good rules of cleanliness.

If consumers are not yet ready to make these demands, the duty lies with all good citizens who understand, with institutions of learning, and especially with public health officials to educate them to this position. Then and only then will satisfactory progress be made.

SOME NEXT STEPS IN SANITATION*

By J. T. GEROULD

Librarian of the University of Minnesota.

MINNEAPOLIS

There was a copy-book maxim which we used to see, to the effect that an ounce of prevention is worth a pound of cure. Do not suppose for a minute that the American people believe any such thing. We are willing to pay for cure, but not for prevention. We go on year after year in a bungling way, creating disease and manufacturing physical defects, thus paying the high cost to the community, almost cheerfully, just as if there was something inevitable about it—as if it were the work of a mysterious Providence and nobody was responsible.

The doctors have been content, too many of them, to do a general repair business, and we laymen have paid, more or less willingly, their fees for curing us of perfectly unnecessary ailments and have begrudged the pittance that goes to the health-officer. When he has shown any tendency to earn his salary, we have kicked him out and substituted some one who has been too good a fellow to worry us with an impertinent curiosity regarding the milk and water supply and the condition of our back yards.

Slowly, very slowly, the idea of preventive medicine has taken hold. "The Dock," to quote Mr. Dooley, "says th' more he practices medicine, th' more he becomes a janitor with a knowledge of cooking." Minneapolis, after twenty odd years of agitation, has at last, by the expenditure of the fabulous sum of \$1,500 eliminated one of her very best typhoid-producing agencies. The nation has begun to talk seriously of a federal department of health, and we are going to get it despite the influence of the patent medicine business and the 'paths of various varieties.

One of the first things which we, as a state, need is a better line of statistics. It is probably true that Minnesota is better off in this respect than a number of states which might be mentioned, but the fact remains that the legal requirement is imperfect and incomplete, the collection of the figures lax, and the results misleading. Tuberculosis is, for example, a reportable disease, but the State Board of Health has official knowledge of only a fraction of the existing cases. A statistical showing based on such a case-record is worse than incorrect, for it gives an entirely false idea of the actual situation.

Our records should show us more of the incidence and causation of disease. They should tell us what this or that occupation, this or that factory or department-store, or such and such conditions in the home, has to do with the health of the community. If we really knew that Mr. X permits the existence of such conditions in his establishment as to cause it to contribute an undue proportion of invalids for our hospitals or derelicts for our almshouses, do you not think that public opinion might re-act on Mr. X? I for one, fully believe that Mr. X is gentleman enough to correct those conditions without pressure, if the facts were once really called to his attention in such shape that he could not contradict them.

Another step: Is it not time we treated with seriousness the problem of fake medicine? Is it not time that we ceased to permit certain fools to endanger the health of your children and mine because, forsooth, they do not believe in the existence of disease? They plead the rights of the individual. The individual has no right to put arsenic in my coffee. Why should he have the right to give me scarlet fever or tuberculosis?

Then there is that other fake, the patent medicine. We spend annually, it is estimated, over \$200,000,000 for these compounds of poor whiskey, opium, and coal-tar products; and while it is perfectly easy to point to any number of deaths caused by these nostrums, he would be a rash man who would attempt to estimate their death-roll. Their users tell us that they cure. Nature can do more remarkable things sometimes, even when hindered by misapplied drugs. I do not for a moment doubt the value as a specific of the left hind leg of a toad killed in the dark of the moon, dried, pounded to powder, and mixed with the patient's food; but that "Peruna" cures catarrh, or that "Piso's Cure of Consumption" ever really aided a sufferer from tuberculosis, or that "Mrs. Winslow's Soothing Syrup" ever is good for babies, I must decline to believe.

Have the promoters of this class of remedies a right to take money on the false pretense of cure, and have they a right to kill the hundreds they do kill who, by reason of a false sense of security, neglect to take proper measures for their own cure?

This leads me to speak of another subject closely connected to it by the link of fake medi-

*Read before the Minnesota State Sanitary Conference, at Minneapolis, Oct. 4, 1910.

cine, the question of venereal disease. We have dodged it with false modesty until the tale of its ravages is astounding and terrifying. Those who have made a study of these diseases calculate that 65 per cent of adult males have had gonorrhea; that 75 per cent of all operations required for inflammatory diseases in women are due to the same cause; that 80 per cent of the cases of blindness in the newly-born have the same causation; and that 45 per cent of sterility in women is to be attributed to the same disease. The mortality from hereditary syphilis is from 60 to 86 per cent.

One might cite terrible figures of this sort almost indefinitely, and their substantial accuracy will be vouched for by every physician whose practice brings him into intimate contact with these diseases. We turn away from the facts in horror and disgust, and do absolutely nothing. We do not even warn our boys of the danger, and we allow them to learn a few distorted facts behind the school-house and on the street corner. I have had men tell me, almost with pride, of the number of times they have had gonorrhea. When the primary symptoms no longer appear the victim believes himself cured. He marries and transmits the disease to his innocent wife and possibly to his children. Should not our daughters have some protection? Should a man marry who cannot show that he has no transmissible disease? Cannot some way be found to drive out of business the so-called medical in-

stitutes which flourish by the dozen in every city? Can we not look the question squarely in the face, study it as we have studied tuberculosis, and try to find a remedy?

In his usual trenchant way, Mr. Roosevelt has recently stated another vital problem of public health: "We ought to find some better method of disposing of our sewage than to put it in our drinking water."

From the strictly utilitarian standpoint, sewage is too valuable a fertilizer to be used in dilute form as a beverage. The ordinary American town considers its problem of sewage disposal solved if it can find some stream of water, no matter how sluggish, into which its system of sewerage can discharge. It is quite unconscious of blame if the next town below has an epidemic of typhoid and is quite ready to attribute it to a dispensation of the Almighty. We do it here in Minneapolis, and he would be a bold city engineer who would dare to suggest a change, but some day the problem will be forced upon us, as it is being forced upon New York City today, by the intolerable conditions which it occasions or by some great epidemic.

When I started to write this brief paper I had in mind a number of other things about which I wanted to speak, and I have them there yet, but there are so many papers on the program and so many able speakers that I am going to keep them there and give my place to some one else.

INTESTINAL OBSTRUCTION DUE TO KINKS AND ADHESIONS OF THE TERMINAL ILEUM*

By CHARLES H. MAYO, M. D.

ROCHESTER, MINNESOTA

The stomach suffers from many reflex conditions, but only one patient in ten with gastric symptoms shows actual lesions. Many bowel conditions, as obstruction, appendiceal concretions, etc., simulate symptoms of ulcer.

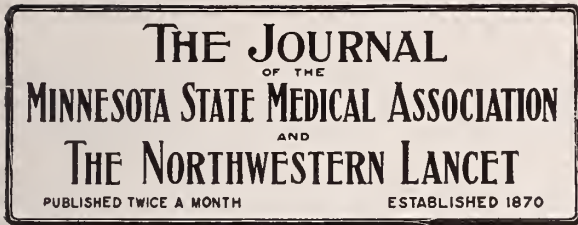
Development of the middle intestine includes from below the common duct to, and including part of, the transverse colon. Ten inches of the ileum is pelvic, was originally fixed to the cecum, and becomes detached at birth except for a lateral opening. When this fails to take place, obstruction is more liable to occur.

In extensive appendiceal operations in cases with obscure symptoms, Abuthnot Lane has noted an intestinal kink near the ileocecal valve. He believes this to cause obstruction, often non-inflammatory, and probably resulting from traction of the loaded cecum to the pelvis.

The symptoms often simulate those of appendicitis, ulcer, and various forms of constipation.

We have seen many cases of this nature, both inflammatory and non-inflammatory, and producing reflex symptoms. Therefore, with the present increased facilities for intestinal exploration, the four terminal inches of the ileum should be examined, when possible, in obscure cases of digestive disturbance.

*Author's abstract of paper read before the Western Surgical Association, Dec. 19, 1910.



W.A. JONES, M. D.,
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W. L. KLEIN,
PUBLISHER

PUBLICATION COMMITTEE OF THE COUNCIL

THOS. McDAVITT, M. D. J. L. ROTHROCK, M. D.
St. Paul St. Paul

F. A. KNIGHTS, M. D.
Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

JANUARY 15, 1911

MEDICAL AND SURGICAL OPINIONS ON EXOPHTHALMIC GOITER

Syllaba, in *Therapie der Gegenwart*, Berlin, abstracted by the Journal of the A. M. A., discusses the treatment and prognosis of exophthalmic goiter from a study of fifty-one cases in which the histories of the patients have been followed since 1895. Treatment in 49 of the cases was exclusively medical, 33.3 per cent being cured and 19.6 per cent improved, giving a favorable outcome in 52.9 per cent of the total number. He, with others, believes that more than half of the cases can be permanently improved by medical care.

Some of his cases were mild while others ran the usual course.

The cases were treated in various ways, and he found that any medical measure may cure and all may fail. In three of the reported cases the symptoms flared up under iodine, showing that this drug may be a poison to many cases.

Each case should be carefully studied, closely observed, and kept under constant scrutiny as sufficient time has not elapsed to draw positive conclusions.

Two of Syllaba's cases were operated on, and in both there was a recurrence of the goiter, one patient dying five months later from asystolia.

In the *New York Medical Journal* the editor comments on the surgical treatment of exophthal-

mic goiter and concludes that mild cases should be treated medically; those of medium intensity may be treated medically for a short time, and then turned over to the surgeon for thyroidectomy; and the severe cases should be treated preliminarily to operation, i. e., everything should be done to build up the patient before operation. The contra-indications for operation are marked cachexia, renal, hepatic lesions, and especially those of the heart, such as myocarditis.

Local anesthesia seems to be the favorite with many surgeons. Usually a unilateral thyroidectomy is done with ligation of the superior thyroid artery on the opposite side. This combination of operations gives, according to Berg's statistics, eighty per cent of cures, whereas only thirty-seven per cent of cures are obtained when a single thyroidectomy is done.

The Mayos frequently ligate both thyroid arteries in the milder cases and do not extract the lobe.

"Alamarthine, at the French Congress of Surgery, held in October of this year, gives the following summary of twenty-five sets of statistics: There were 669 cures or marked improvements, 174 slight improvements or none at all, and 63 deaths from operation; in other words, 669 favorable results and 237 bad."

These statistical findings may be taken for what they are worth. Probably the internalist will scoff at them and point with pride to his own statistics.

Now comes a new theory advanced by C. J. Koenig, of Paris, in the *New York Medical Journal* for Dec. 24, 1910. At a congress of rhinolaryngology in Vienna in 1908, several communications were reviewed by prominent specialists which show cures or improvements of Basedow's disease consequent upon nasal operations.

Adenoids and hypertrophied tonsils removed cured the exophthalmos, showing a possible connection between the disease and the pharyngeal tonsil.

On the other hand, however, the same author reports the development of an exophthalmos after removing enlarged tonsils. No symptoms of exophthalmic goiter had existed before the operation, but developed immediately afterward. This case suggests another avenue for a toxic state. If the tonsils constitute a route for the invasion of rheumatism they may also furnish a similar pathway for exophthalmic goiter.

The whole question seems as unsettled as ever, and the mimic war between the surgeon and internalist will continue in mild battle.

THE NATIONAL CONFEDERATION OF STATE MEDICAL AND LICENS- ING BOARDS

The annual meeting of the above-named bodies will take place at the Congress Hotel, Chicago, February 28, 1911, as noted in another column.

The topics to be taken up are all practical and of vital interest to all medical schools, physicians, and laymen, particularly after the scathing report from the Carnegie Foundation for the Advancement of Teaching. One can easily anticipate the attempt to explain the defects found in medical schools by Flexner. There will be much indignation expressed and doubtless much cross-criticism from those who were inspected and found wanting.

Minnesota, fortunately, has no complaint to offer and needs no champion other than its own State Examining Board. The Minnesota board has taken such a radical step in the direction of requirements which are to be enforced in 1912, that other boards are trying to keep up with Minnesota. It required a good deal of courage for our men to decide as they did, but they were far-sighted and knew what was best. It is a good sign for the future, and it is to be hoped that the example set by Minnesota will be adopted by all other state boards.

A UNIVERSITY HEALTH OFFICER

A health and sanitary committee appointed and authorized by the Board of Regents has made a report to that body who have given their approval to the plan outlined.

The State Board of Health has also approved the preliminary plan and if the Attorney-General sees no objection it will be taken to the Legislature for final approval.

A University Health Officer will be employed who will give his whole time to the work, and, with assistants, will inspect the entire student body. It will be a plan of medical school-inspection of the highest order, and will set a pace for medical school-inspection all over the state. To inaugurate an ideal plan of school-inspection will be no easy task, particularly as a minute case-record of each student will be undertaken.

The first year of inspection will be a trial of the plan to be finally adopted. After three years or perhaps less the new incoming students will be inspected, and those already on the records will be observed for new developments. The University Health Officer will also give instruction to the general student body on general and

personal hygiene, and instruction will be given on all sanitary topics. The scheme also embraces all departments in the university that have an allied interest in sanitary problems.

The rules and regulations governing the new health office will be those already adopted by the State Board of Health. There will be no conflict with either state or municipal health authorities, as the work will be conducted in harmony with all state and municipal requirements.

In a way it will be helpful to other health officials by keeping a check on the exposures or illnesses of students. The University Hospital and Dispensary will care for needy students in the same way it cares for the other wards of the county and state. The new officer will have the Agricultural School and College under his care and thus save these two thousand or three thousand dollars each year.

The entire expense of this elaborated plan, including salaries of chief and assistants, office equipment, etc., will be about \$10,000 per annum. It will be an opportunity to do an immense amount of good, a step in the right direction, an example to other universities and schools, and will keep the students up to a high health level.

BENETOL

THE JOURNAL-LANCET has cancelled its contract for advertising with the Benetol people, and their advertisement has been dropped from our columns.

We have no occasion to find fault with the preparation Benetol, for it has been shown to possess germicidal properties equal to or greater than carbolic acid.

For some time the manufacturers of Benetol have tried to follow legitimate lines of promotion among medical men, and in the State of Minnesota they have refrained from unethical advertising. Of late, however, inquiries have been coming in from various states inquiring about the standing of the Benetol people and their preparation.

Nearly all of the medical men connected with the faculty of the College of Medicine and Surgery in the University of Minnesota have received letters from friends and strangers asking for an opinion of Benetol. A few days ago the "North American," a Philadelphia paper, had a full-page "feature article" proclaiming the advantages of Benetol. In this article the statement was made that the preparation "will kill any kind of germ without harming human tissue," and the article goes so far as to claim that pul-

monary tuberculosis can be cured by Benetol. It is also claimed that cancer can be successfully treated.

The promoter, who calls himself Dr. Hubert Charles Von Fuerstenburg Carel, was at one time employed in the Department of Chemistry and Toxicology of the College of Medicine and Surgery of the University of Minnesota, but was dropped from the faculty roll for the good of the University. During his stay in the chemical building he experimented with various chemical agents and promoted a remedy for baldness; later he discovered a compound which he named Benetol. He induced his friends to experiment with his composition, and as it had merit, they gave him testimonials to be used among physicians.

Carel has violated the confidence of his friends and has caused to be published statements that are overdrawn and misleading, and his newspaper publications are so gross and distorted that they can be classed with patent medicine claims.

It is unfortunate that he should permit himself to be sponsor for a chemical that claims to be beneficial in or to cure cancer, tuberculosis, typhoid fever, leprosy, chronic catarrh of the stomach, eczema, blood-poisoning, hemorrhoids, and pyocyanous infection, when it possesses only the germicidal properties of carbolic acid or lysol.

Because of the unethical advertising and the atrocious claims made by the Benetol promoters THE JOURNAL-LANCET discontinues the advertisement.

THE SPECTATOR—A FOREWORD

We take great pleasure in introducing our readers to the Spectator, who has been invited to share with the editor, at least during the present year, the pleasure of saying some things that ought to be said to physicians. Now, "gentle" reader, just stop and ask yourself a question, and your answer may solve for the editor a problem ever arising before him and demanding solution. Do the words *ought to be said* suggest to you that the Spectator is going to use scolding or fault-finding words? If so, why *ought* such words to be spoken, at this or any other time, to physicians? And, again, if such be your answer, why think you we use, in the same sentence, the words to *share with us the pleasure*?

The above are serious philosophical questions, and the reader who has never propounded them

to himself may not enjoy the musings of the Spectator; but if so, we pity him.

We shall not now answer the question ourselves, but the reader may find a hint in that direction in two short paragraphs of our letter of invitation to the Spectator. They ran thus:

We want to start in our paper a department of things suitable for the digestion of doctors with red blood in their veins, beating a normal tattoo, radially or otherwise; and we want you to contribute most of this material. Our thought is to give something at once readable and helpful.

As you know, doctors have frailties. These can be used to point a moral. Once they had, or are reputed to have had, great hearts; now they have, or are reputed to have, great heads only. And here is a suggestion.

How well the Spectator has caught the spirit of our suggestion, and how kindly he has expressed it, will be seen in his first letter.

May we not add that the homes of this nation, and of every civilized nation under the sun, are aflame with the lights left in them by self-sacrificing physicians who for many weary years have "driven home in mud and rain in the dark morning hours," and must continue to do so while the mission of the physician is a mission of healing? They are the men with hearts. Can the men with "heads only" keep these lights burning?

THE SPECTATOR

[For a foreword about this new department see the editorial above.—The Editor.]

Once upon a time a little boy, a friend of the Spectator, lay in the fever of pneumonia. Had he been able to look through the thick-frosted window at the head of his bed it would have been upon a world buried under a three-foot blanket of snow, with ten miles of drifted roads between him and the nearest physician. The fresh spring-water his mother brought him to drink had a taste like an old poultice, and his mouth had the feeling of dirty flannel. The thought of food was repulsive, but the need of drink was urgent. If only he could have a drink of lemonade like that from the barrel in the grove at the last Fourth-of-July picnic, he knew he would be refreshed and, maybe, be well again. In his distress he told this to his mother. The nearest probable lemon was four miles away through storm and drift at the cross-roads store. An elder brother volunteered to put on his wraps and waders and go in quest of the lemon. In the course of long hours it came—a little green, weazened thing, the last of the stock at the

store. The boy watched the making of the coveted drink with eager eyes. But when he drank—oh, the vileness of it! The awful, sticky, bitter, sickening tang to the stuff! "What makes the lemon taste so nasty, mother?" he asked. "It isn't the lemon, dear," she replied, "it's the fever."



Next door in our office-building once was a man who was a persistent pursuer of pleasure. Anything that promised fun was his meat and drink—particularly drink. Beneath his watery eyes were great deflated fun-puffs, and the valleys on the map of his face all sloped southerly. A more sad or saddening mortal one would not wish for a next-door neighbor; and yet he had not given up his quest for joy. He joined joy-promoting societies; he attended joy-stimulating banquets. He was constantly reaching out for the pink lemonade of life, and, as regularly, receiving the green lemon. The taste of the lemon was chronically in his mouth. He died of it. You have often heard people say that life is always of this quality: that the actual never comes up to the ideal; that you can't get what you expect; and that the end of all things is disappointment. Solomon said this same thing three thousand years ago; but just before he said it he confessed to having stuffed himself with samples of every good-looking thing under the sun. In such a condition no man is fit to judge between food and poison. The fever flavor is in his mouth; he is a sick man. The principal ailment of the American people today is that they are over-stuffed with good things. Nothing in hand looks as good as something just ahead of the hand. When getting things becomes a man's ambition, having things cannot satisfy. His case becomes then as hopeless as that of old Tantalus, who died of thirst immersed to the chin in good drinking-water.



If a man is going to enjoy himself in this life he must do it while he is alive; and as he is alive only at the present moment, this makes it necessary to enjoy the present moment. My fun-chasing neighbor did sometimes enjoy the present moment, but he expected to pay two prices for it the next morning. He always mortgaged the future for his present pleasure, till finally the mortgage was foreclosed. That is what killed him. No enjoyment is wholesome that leaves a bad taste in the mouth or that is not fully paid for in advance. The world lacks this kind of enjoyment most woefully, not because it is not

easily within reach, but because people reach the wrong way for it. Reaching directly for pleasure is much like hitting at a mosquito in mid-air: the impact on the atmosphere creates a current that drives the evanescent thing away. Pleasure, like the mosquito, follows the man who is busy with his regular business. The mosquito-chaser is rarely an all-round success.



One day just before recitation in the ethics class, my seat-mate, Brown, confided to me that he took square issue with the President of the University on the proposition that pleasure cannot be attained by a direct pursuit of it. Fate decreed that this very question should come to Brown. He rose with dignity, thumbs in his vest-pockets, and, with the air of Ajax defying the gods, said: "Yes, Mr. President, I think it can." "Next!" said the President, and Brown sat down minus his dignity. It is probable that ever since time began, Experience, the school-master of fools, has squelched the pleasure-chaser with a "next." Brown now admits that the President had the best of the argument.



It was a most beneficent Providence that so related man to his surroundings that he has to hustle for a living. Work, spurred by a touch of hunger and cold, has kept more men from going wrong than great wealth ever could. "The sleep of the laboring man," says an old Hebrew proverb, "is sweet, whether he eat little or much." The laborer's appetite and his sleep are thrown in free with his work. The joy-chaser, on the contrary, usually has to buy both these at the drug-store. I have known men to sit up to cock-crowing time at a champagne-washed, vaudeville-spiced joy-fest, trying in a most jagged and hopeless way to renew that inward bubbling of life they used to feel in their fresher, unfrayed years. Heaven help us! For pure jubilation I'd rather sit up all night alone with a corpse. Saul's midnight visit to the Witch of Endor is not more ghastly to contemplate than such a conjuring up of the dead ghosts of better days. Give me rather the joy of the good physician driving home in mud and rain in the dark morning hours having left behind a home alight with the joy of a child born into the world, or a fever crisis turned toward life, or, at the worst, knowing that he had fought a faithful fight with death before he closed the dead man's eyes.



There is no joy like the joy that comes with a hard-won victory, and no satisfaction like that

attending work well done. Real pleasure is a by-product of a life well lived. It never yet was sold over the counters of the world's market. It is only given as a premium for good behavior.

CORRESPONDENCE

MALE FERN AND CASTOR OIL A DANGEROUS COMBINATION

Minneapolis, Jan. 9, 1911.

TO THE EDITOR:

Recently a prescription calling for the following ingredients was presented to an eastern pharmacist for dispensing:

Oleoresin of male fern	4.0
Oil of turpentine	2.0
Castor oil	60.0

M. et Sig. Use at one dose.

The presence of castor oil in the above mixture would cause the prescription to be a dangerous one since the filicic acid, one of the poisonous constituents of male fern, is dissolved by the castor oil, its absorption being thus promoted. The oleoresin of male fern should never be prescribed with castor oil or other oily substances; and, in some European countries, there is a legal prohibition against dispensing extract of male fern in combination with castor oil.

It appears that where large quantities of the drug are absorbed, grave and even fatal symptoms may ensue. These untoward effects are vomiting, acute pain in the abdomen, purging, muscular weakness, somnolence, convulsions, coma, and death. Jaundice is caused in some cases, and in others, what is to be particularly noted, temporary or permanent blindness has resulted from neuritis and subsequent atrophy of the optic nerve. In a paper read by Mr. J. Leon Lascoff and abstracted by the American Druggist, the author recites a case quoted by Professor O. Everbusch, of Erlangen, Germany: A youth of twenty years of age, thinking he had a tapeworm, took a preparation containing ten parts of extract of male fern and ninety parts of castor oil. Immediately he developed violent headache and nausea, and then fell into a sleep lasting thirty-six hours. On awakening he was totally blind. Examination showed that he was suffering from optic neuritis and contraction of all the blood-vessels of the optic nerve and retina. Albuminuria of a severe type also developed, which, however, disappeared in the course of a few days. All known remedies were applied, but

were of no avail, and the patient remained totally and permanently blind from optic neuritis.

Personally, I have had similar prescriptions presented to me for dispensing. Upon acquainting the prescribers with the danger of the prescription, they readily consented to administer the male fern without the castor oil. The prescription being rather uncommon, not all physicians and pharmacists may be acquainted with its danger. That is the only reason I have for again calling attention to the matter.

FREDERICK J. WULLING,

Dean of the Department of Pharmacy, University of Minnesota.

MISCELLANY

MEDICAL EXAMINING AND LICENSING BOARDS

The National Confederation of State Medical Examining and Licensing Boards will hold its Twenty-first Annual Meeting in Chicago on Tuesday, Feb. 28, at the Congress Hotel.

The subjects to be taken up at this meeting will be a consideration of the state control of medical colleges; a report by a special committee on clinical instruction; a report on a proposed materia medica list by a special committee; the report on a paper presented at the St. Louis meeting by Mr. Abraham Flexner of The Carnegie Foundation for the Advancement of Teaching; and some special papers on such subjects as the regulation of medical colleges, the necessity for establishing a rational curriculum for the medical degree; and others, by men eminently qualified to prepare papers upon such subjects.

These topics are all of practical and vital interest to medical colleges, medical examining-boards, the profession at large, and the public. The symposium will be composed of ten papers and be presented from the viewpoint of state, law, medical colleges, state medical examining and licensing boards, and the medical profession. The contributors of papers to the symposium on state control of medical colleges are men of the highest attainments in matters pertaining to state, law, and the medical profession, and their production will be worthy of the most careful consideration. The chief object of the symposium is to determine, as far as possible, the feasibility of placing medical colleges under state control. The special committee on materia medica made a report at the St. Louis meeting of the Confederation June 6, 1910, and it was contin-

ned and instructed to report again at the next annual meeting of the Confederation in 1911. The report of this committee, made at St. Louis, has received very favorable comment by many of the editors of medical journals, and should receive at the Chicago meeting extended and careful consideration. The report on Mr. Flexner's paper is published in the proceedings of the St. Louis meeting of the Confederation, page 64, and will be open for discussion at the Chicago meeting.

An earnest and cordial invitation to this meeting is extended to all members of state medical examining and licensing boards, teachers in medical schools, colleges, and universities, delegates to the Association of American Medical Colleges, to the Council on Medical Education of the A. M. A., and to all others interested in securing the best results in medical education.

The officers of the Confederation are, President, J. C. Guernsey, M. D., 1923 Chestnut St., Philadelphia; Secretary-Treasurer, George H. Matson, M. D., Columbus, Ohio.

AMENDED AND NEW REGULATIONS PASSED BY THE STATE BOARD OF HEALTH ON JANUARY 10th, 1911

The following are changes in the existing regulations of the State Board of Health passed at its last meeting. No. 58, a regulation for the management of cases of erysipelas, is a new regulation.

All will become effective upon the approval of the Attorney-General and the usual publication.

Strike out existing regulation No. 2 and insert the following:

2. The other members of a household where a patient is under isolation for diphtheria or scarlet fever shall be under quarantine also except as follows:

If the patient be entirely isolated, in a portion of the house used for no other purpose, and under the charge of a reliable attendant, the local health officer shall make a statement in writing to that effect and furnish copies thereof to such members of the household as may be employed at gainful occupations, other than teaching or such other work as may bring them into contact with children. On receipt of such signed statement in writing, such persons may pursue their ordinary vocations, provided they shall furnish a signed statement to said physician and to their employer, declaring that they will not come into contact with the patient, the

patient's room or any thing or any person which is in contact with the patient or the patient's room.

School children, teachers or others having to do with children shall be excluded from day-school, Sunday-school or any public or private gatherings whatever for one week of observation after last exposure to any case of scarlet fever or diphtheria within the household; they shall not attend any day-school for a period of two weeks from the date of last exposure; except that in the case of exposure to diphtheria two consecutive negative cultures from both nose and throat, secured at any time in accordance with regulation No. 26, after last exposure shall free the person presenting them of all restraint. Residence in a household where diphtheria or scarlet fever exists shall constitute exposure.

No. 10. No person engaged in handling actual food or food products for sale, no salesman or clerk in grocery or butcher shops, in milk, cream, or dairy products shops, in candy shops or bakeries, or other places where food is sold, and no waiter, waitress, cook, or other employe of a hotel, restaurant, boarding-house or other place where food is sold, shall handle actual food or food products for sale or consumption in any manner whatever, while infected with scarlet fever, diphtheria, smallpox, chickenpox, typhoid fever, or measles; and any person shall be deemed infected if residing, boarding, or lodging in a household where any one or more of the diseases exist.

No milk, butter, or other food or food product to be eaten raw shall be sold or given to any party or delivered at any creamery or butter factory, store, shop or market from a house where a case of scarlet fever, diphtheria, smallpox, chickenpox, typhoid fever or measles exists; nor shall any member of such household handle milk or milk products for sale in any manner whatever. The sale of such foods or food products is forbidden from farm premises where any of the specified diseases exist except under the following conditions:

Complete separation of the work of the farm from the household concerned shall be made, so that the household shall be quarantined against the rest of the farm, and no communication whatever shall continue. Those having to do with the food or food products shall eat, sleep and work wholly without the affected house and shall in no way handle any thing or person whatever coming from or connected with the house, nor shall those quarantined in the house handle

any person or any thing connected with the food or food products, or those working with the food or food products in any manner whatever.

EPIDEMIC CEREBROSPINAL MENINGITIS

18. Every case of epidemic cerebrospinal meningitis shall be reported to the local health officer at once. The patient shall be isolated for a period of at least two weeks from the onset of symptoms. The discharges from the nose, throat and mouth of the patient must be received on cloths and burned at once. After death or recovery of the patient all personal clothing and bedding, together with the contents of the room and the room itself, must be thoroughly disinfected under the personal supervision of the local health officer. In case of death, a public funeral or viewing of the remains of the deceased must be forbidden. Every doubtful case of cerebrospinal meningitis must be classed as of epidemic type and cared for accordingly until proved to be otherwise.

EPIDEMIC ANTERIOR POLYMYELITIS

18a. Every case of epidemic anterior poliomyelitis shall be reported to the local health officer at once. The patient shall be isolated for a period of two weeks from the onset of symptoms. All other children, teachers or others having to do with children, residing in the affected household, shall be kept under observation for a period of three weeks from the date of last exposure within the household; they shall not attend during this period day-school, Sunday-school or any public or private gathering whatever. Residence, boarding, or lodging in a household during isolation therein of a patient suffering from anterior poliomyelitis shall constitute exposure. The discharges from the nose, throat and mouth of the patient must be received on cloths and burned at once. After death or termination of isolation all personal clothing and bedding of patient, together with the contents of the room and the room itself, must be thoroughly disinfected under the personal supervision of the local health officer. In case of death a public funeral or viewing of the remains of the deceased is forbidden. Every doubtful case of anterior poliomyelitis shall be classed as of epidemic type and cared for accordingly until proved to be otherwise.

19. The local health officer having knowledge of or having reason to suspect the existence of scarlet fever shall investigate, if necessary, and shall at once place under quarantine all scarlet

fever patients and those having the care of or coming in contact with such patients, except the attending physician, health officer, sanitary inspector, or, in case of death, a licensed embalmer.

The quarantine period for scarlet fever shall never be less than three weeks and may be longer. Quarantine must not be released until the health officer has satisfied himself that desquamation (or peeling) is completed, and that the condition of the nose and throat is normal. But the patient shall not attend day-school, Sunday-school or any public or private gathering whatever until a second examination by the health officer or medical school inspector, made not less than one week after release from quarantine, shall demonstrate a continuance of the normal condition of nose and throat, and of the absence of desquamation. In case ear discharges exist, the patient shall report weekly for examination by the health officer or medical school inspector, and shall carry out such precautions to prevent the spread of infection therefrom as he shall prescribe. The quarantine must not be raised until three weeks or more, as the case may be, after the appearance of the last case in such family or household.

41. No person affected with tuberculosis shall dispose of the sputum or other infectious bodily secretions or excretion so as to cause offense or danger to any person or persons. No person in an infectious stage of pulmonary tuberculosis shall handle in any capacity actual food or food products for sale including milk, butter or other dairy products, nor act as salesman or clerk, handling food or food products, in milk, cream, or dairy products shops, grocery or butchers' shops, candy or bakers' shops or other places where food is sold; nor shall any such person act as waiter, waitress, cook or other employe engaged in handling food, at any hotel, restaurant, boarding house or other place where food is sold.

REGULATION FOR ERYSIPELAS (NEW)

58. Every case of erysipelas shall be isolated in a room used for no other purpose. No dressings, bed, bedding, or clothing, eating utensils, or other things used or touched by the patient shall be removed from the room until disinfected. No person except the necessary attendants shall enter the room, nor shall any one leave the room without thorough disinfection of the clothing or person, especially the hands, etc., which may have been in contact with the patient, the patient's bed, bedding, clothing, eating utensils or

Where the mucous membranes of orifices of the patient's body are involved, disinfection of all discharges of the orifices concerned shall be made.

No midwife, obstetrical nurse, or other person having to do with nursing an erysipelas case, shall, during the same period, conduct confinements or attend lying-in cases, dress operative or other wounds, or care for very young children; nor shall any such person sell or handle milk or other raw food products for sale.

UNSANITARY AND UNSAFE SCHOOL BUILDINGS

For an act to prohibit the use of unsanitary or unsafe buildings or premises for school purposes and providing penalties for the violation thereof.

Be it enacted by the Legislature of the State of Minnesota:

Section 1. Upon written complaint made to the State Board of Health that any building or premises in an unsanitary or unsafe condition are being used for school purposes, the Executive Officer of the State Board of Health, or some person designated by him for that purpose, shall investigate such, and make an examination of the building and premises so complained of, and make a report of the result thereof to the State Board of Health, which may then appoint a time and place for hearing the complaint, and shall give notice of not less than ten (10) days to the complainant and to the persons, board, or corporation so using said building or premises.

Any person desiring so to do may appear before said State Board of Health and give testimony, or affidavits may be filed with said Board, relative to the condition of the building and premises complained of.

After such hearing, if, in its judgment, the public health, comfort, safety, and convenience require, the State Board of Health shall order the discontinuance of the use of such building or premises until put in sanitary condition in such manner and form as the State Board of Health may direct, and shall post a notice on the building embodying such order.

After such order has been so posted, any person, persons, board, or corporation using such building or premises for school purposes shall forfeit ten (10) dollars for each day after the first, to be recovered by the State Board of Health in its name and for the benefit of the school district in which such building or prem-

ises are situate. The Superintendent of Public Instruction is also directed to withhold from such school district the share of the current school fund to which it may be entitled by virtue of the pupils in attendance upon the public school in such building, as well as any special State aid to which the school district would otherwise be entitled if the school building and premises were kept in a safe and sanitary condition.

Sec. 2. After the posting of such notice, any party aggrieved by such order may appeal therefrom to the district court of the county by giving notice of appeal as in other cases, together with a bond of not less than two hundred (200) dollars, to be approved by the judge of said court, conditioned for the prosecution of such appeal to judgment and for payment of all costs and expenses that may be awarded against such appellant. If such appeal be taken within twenty (20) days before the time for holding any general term for said court within said county, it shall be heard at such time. If taken more than twenty (20) days before any such term the judge shall appoint a time and place for hearing the same. During the pendency of such appeal teaching shall not be carried on in the building or on the premises described in said order of the State Board of Health, and upon violation of any such order the appeal shall forthwith be dismissed.

The court trying said appeal may confirm, alter, modify or amend the order of the State Board of Health as the evidence may warrant.

Note.—The above is a bill to be recommended by the State Board of Health for passage by the present State Legislature of Minnesota.—THE EDITOR.

SUGGESTIONS FOR A BILL FOR WHOLE TIME HEALTH OFFICER AND MEDICAL SCHOOL INSPECTOR

In the event of any school district and a municipality contained in whole or part in such district, desiring to employ as medical school inspector and health officer a physician who will give his whole time to such work, then the state shall pay one-third of the salary of such physician, and the remaining two-thirds shall be borne equally, or as may be agreed upon, by such school district and municipality.

Such desire shall be expressed by resolution adopted by the governing bodies of the school district and the municipality, as are other resolutions used or touched by the patient.

lutions, which resolution shall state the salary to be paid such physician. Upon the filing with the State Board of Health of a certified copy of such resolution, such Board shall select a suitable physician for the position and submit such selection to the governing local bodies for approval. Upon the approval by the local governing bodies, the physician so selected shall be considered as employed for the positions stated for the ensuing year or until removed for cause.

The duties of such official shall be as provided for by the joint action of the State Superintendent of Public Instruction and the State Board of Health and shall include the duties as now exercised by local health officers; and, as school inspector, he shall, among other things, investigate into the physical condition of the child, the healthful condition of the school-room, school-grounds and premises, the proper seating, lighting, and ventilation of the school-room.

The school district and the municipality, when deemed necessary, may employ assistants and visiting nurses in order to carry out satisfactorily the work assigned to said medical school inspector and local health officer, upon the recommendation of such physician.

For the carrying out of this act, there shall not be expended an amount in excess of twenty thousand (20,000) dollars in any one year by the State Board of Health.

Note.—The above suggestion is for a bill to be introduced in the present Minnesota Legislature. It is the so-called "permissive" bill which enables any municipality to take advantage of State aid and to carry out medical inspection and sanitation under the direction of a trained man.—THE EDITOR.

BOOK NOTICES

THE PRACTICAL MEDICINE SERIES. By G. D. Head, M. D., and C. L. Mix, A. M., M. D. Vol. V. Obstetrics, by J. D. DeLee and H. M. Stowe. The Year Book Publishers, 40 Dearborn St., Chicago, Ill.

This book aims to give a résumé of the literature of the preceding year which deals with the practice of obstetrics. For the most part, only the things of practical importance are considered under four main subdivisions: Pregnancy, Labor, Puerperium, and the New-born.

The book is well worth the time spent in reading it if one wishes to become familiar with the

work that is being done in this branch of medicine. The parts which are especially important are those dealing with abortion, the obstetric hemorrhages, anesthesia, pelvic contractions, Cesarean section, early rising in the puerperium, and puerperal sepsis.

It would be well if the advice given in the consideration of the treatment of asphyxia neonatorum were more commonly followed.

One of the most valuable features of the book is the expression of opinion by the editor on topics which come under consideration. It gives definiteness to what might otherwise be more or less a conglomeration of ideas.

PHYSICIAN'S VISITING LIST. P. Blakiston's Son & Co., Philadelphia. Price, \$1.50.

No better testimonial to the general usefulness of this publication could be offered than the fact that it is now in the 60th year of its publication. It affords a convenient means of keeping track of the physician's business and in addition is supplied with a large number of special features of interest and value to physicians, such as columns for addresses of patients and nurses, columns for special engagements, such as obstetrics, and columns for recording births and deaths. In addition there are tables of signs, a short review of the subject of incompatibility, a list of poisons and their antidotes, weights and measures and directions for writing prescriptions in the metric system, and a list of drugs and their doses.

SYMPTOMATIC AND REGIONAL THERAPEUTICS. By Geo. Howard Hoxie, A. M., M. D. Pp. 449, 58 Illustrations. D. Appleton & Co., New York and London.

This book is based on material collected for the course in general therapeutics recommended by the American Medical Association and the Association of American Medical Colleges. In the words of the author, "it forms a transition from the laboratory to the clinic." It seems to hold somewhat the same relation to internal medicine that a text-book on minor surgery bears to the general subject of surgery.

The first portion is given over to a consideration of symptoms and their relief, and to the relation of symptoms to pathologic processes. The second portion is devoted to the therapy of inflammation, and the third to a discussion of the different disease entities and their treatment. An appendix contains brief memoranda of all the drugs mentioned, including dosage and official preparation.

The book is a useful addition to medical literature, and will be especially helpful to medical students and recent graduates. The most severe criticism that can be urged against the book consists in this, that in an endeavor to cover a large field, insufficient attention has been given to certain subjects.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF DISORDERS OF METABOLISM AND NUTRITION. By Professor Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. Part VIII. Inanition and Fattening Cures. Part IX. Technique of Reduction Cures and Gout. Authorized edition, edited and translated under the supervision of Alfred C. Crofton, M. D., Chicago, Ill. New York: E. B. Treat & Co., 1910. Pp. Part VIII, 103; Part IX, 112. Price, \$1.50 each.

Two additional monographs are now added to the excellent series written by von Noorden. These two in particular contain a valuable addition to our knowledge of dietetics, a subject very little appreciated by most medical men.

In the first volume the author recommends for inanition the use of such a diet that its caloric value will suffice to maintain adequate nutrition. At the same time the diet must be so composed that it spares, so far as possible, the diseased organs, and it must neither directly nor indirectly overtax any portion of the body.

In the second volume the author proceeds on more or less the same principles. The caloric value of the food taken in, being known, it is gradually decreased, until it lies below the level of the ordinary maintenance-diet. Just as in the fattening cure, individual peculiarities are given careful consideration. Routine treatments are strongly discouraged.

Both books are written in the author's clear and concise manner, and the whole subject, so far as possible, is put on a scientific basis.

REPORTS OF SOCIETIES

HENNEPIN COUNTY SOCIETY

The Society met on December 5th, with 77 members present.

Drs. W. H. Pope, Paul F. Brown, and L. B. Baldwin were elected members, and Dr. Charles H. Keene, medical inspector in the public schools, was elected a visiting member.

Dr. Haggard reported for the Milk Commission that the Commission is in favor of having certified and inspected milk for the city.

The motion of Dr. Hamilton, to establish sections of the Society and bring together the specialists in work of interest to them only, was carried.

A committee, consisting of Drs. Crume, Head, and Dunsmoor, was appointed to consider the matter of a building for physicians. It was pointed out in the discussion that in many Eastern cities physicians cannot find suitable down-town offices, and are therefore confined to their residences for offices.

Officers, committees, etc., were nominated for 1911, to be voted upon at the January meeting.

Dr. A. C. Strachauer presented a paper on "Venous Anesthesia," which will be published later in these columns.

Dr. F. W. Schultz presented a paper on "Finkelstein's Classification of Gastro-Intestinal Diseases of Infants," and this paper will also be published in these columns later.

Both papers were discussed at length.

Dr. Jakob Hvoslief presented a case of abnormal first rib. The report will be published here-in later.

C. H. BRADLEY, M. D., Secretary.

UPPER MISSISSIPPI SOCIETY

The Society will hold its ninth annual meeting at Little Falls, Minnesota, on January 17, 1911.

There will be an afternoon session at three o'clock at which time Dr. W. A. Jones, of Minneapolis, Professor of Mental and Nervous Diseases in the University of Minnesota, will give a clinical lecture on nervous diseases. Four or five interesting cases of different types will be available for this clinic.

Dr. F. H. Knickerbocker will give the presidential address. Dr. L. M. Roberts will give some clinical reports. Dr. C. F. Coulter will speak on bronchoscopy and esophagoscopy, with demonstrations. Dr. W. W. Will will read a paper on "Scarlet Fever."

A banquet will be served at Hotel Buckman at 6:30 p. m. The regular program, including business meeting and election of officers for ensuing year, will be held in the evening.

G. H. LOWTHIAN, M. D., Secretary.

NEWS ITEMS

Dr. A. J. Ostrander has moved from Kensington to Swanville.

Dr. Wm. Eichler, of Underwood, N. D., will spend three months in Vienna.

Dr. Henry G. C. Van Beeck, of Hastings, died last month at the age of 48 years.

Dr. James L. Lynch, of Winona, was married last month to Miss Nora J. Guidinger, of St. Charles.

Dr. A. B. Moore, of Fauquier, Virginia, has become a member of staff of St. Mary's Hospital, Rochester.

Dr. E. H. Current, of Mobridge, S. D., has decided to locate in Washington. He will move to that state soon.

Dr. Neil McLean, of Kenmare, N. D., was married last month to Miss May Belle Erickson, of Minneapolis.

Dr. R. H. Love, of Saskatoon, Sask., was married in Fargo last month to Miss E. Grace Burrows, of the latter place.

The physicians of New Ulm have raised their moderate local fee, formerly \$1.00 for a day call, to \$1.50 for a day call.

Dr. H. J. McDonald, of La Crosse, Wis., died last month at the age of 74. He was one of the first eye, ear, nose, and throat specialists in Wisconsin.

Dr. John A. Johnson, who took the two-year course in medicine given by the University of North Dakota, and completed his course in Chicago, has located at Hensal, N. D.

On the night of Jan. 1st, the hospital at Walker was partially destroyed by fire, and the patients were driven out with the thermometer over twenty below zero.

The wife of the late Dr. Vittum, of St. Paul, has a reading notice following this column, offering the offices and fixtures of her late husband for sale. The opening is a good one.

Dr. R. W. Pence, of Minot, N. D., will move to New Mexico. Dr. Pence has practiced several years in Minot, and is recognized as one of the leading physicians of the city.

The State Senate of Minnesota contains two druggists and one physician, Dr. Saxe J. Fro-

shaug, of Benson. The House has five druggists and one physician, Dr. H. R. Diessner, of Waconia.

The county and district medical societies of North Dakota have been asking members of the legislature to be their guests and to discuss with them the medical-practice act the physicians have prepared to present to the present legislature.

Dr. James Hynes, of Minneapolis, has been appointed county physician by the Hennepin County Commissioners. Dr. Hynes succeeds Dr. T. T. Warham, who succeeded Dr. Hynes at a previous election. This game of see-saw is a pretty one.

The U. S. Marine Corps inform us that a man calling himself "Captain E. T. Geittmann, of the U. S. Marine Corps," is traveling in the Northwest and imposing upon physicians and others, claiming to be a recruiting officer. He is an impostor.

The Yankton (S. D.) District Medical Association met at Yankton last month. The following officers were elected for the current year: President, Dr. H. J. Koobs, Scotland; vice-president, Dr. Melgaard, Volin; secretary and treasurer, Dr. James Roane, Yankton.

The Fourth District Medical Society of South Dakota met at Fort Pierre last month, and, after listening to two papers, elected the following officers for 1911: President, Dr. C. M. Hollister, Pierre; vice-president, Dr. N. B. Gearhart, Pierre; secretary-treasurer, Dr. J. M. Walsh, Fort Pierre.

Prof. E. F. Ladd, pure food commissioner of North Dakota, is after the fraudulent patent medicines, for which, he asserts, North Dakota is a dumping-ground. Professor Ladd will ask the North Dakota legislature to increase the requirements of applicants to become druggists in that state.

The physicians of Hettinger County, N. D., have organized a medical society, the membership including all the physicians in the district. The following were elected officers: President, Dr. J. W. Stribling, New England; vice-president, Dr. J. Hamilton, Bentley; secretary and treasurer, Dr. F. T. Rucker, Mott.

The attention of our Minnesota readers is especially called to the drafts of two bills to be introduced into the State Legislature at an early date. The drafts are published in another column. And we also publish in this issue some

new and amended regulations of the State Board of Health.

Dr. Christopher Graham, of Rochester, is "the proud possessor"—we believe that is the proper phraseology—of the highest-scoring (most nearly perfect) pullet in America. It is a White Orpington, and has $96\frac{3}{4}$ points to its (her) credit. We presume it (she) is worth a million, even though none of our doctor friends might be willing to pay this price. Dr. Graham is said to have a whole brood of these valuable Orpingtons, and so we presume he may be said to be a "captain of industry." The pen (mightier than the sword) is on exhibition this week at the poultry show in Minneapolis.

Dr. W. A. Jones, the editor of THE JOURNAL-LANCET, was elected president of the State Board of Health last week, succeeding the late Dr. Hutchinson. Dr. B. J. Merrill, of Stillwater, was elected vice-president, succeeding Dr. Jones; and Dr. H. H. Mullin, who has been connected with the Laboratories of the Board for some time, was made Director of the Laboratories, succeeding Dr. Westbrook, who recently resigned because of a lack of time for the work. Dr. Mullin will maintain regular office-hours (9:30 A. M. to 5 P. M.), which will prove very helpful to physicians seeking the assistance of the Laboratories.

[Notice.—A physician who offers his practice for sale through these columns is entitled to full information concerning an applicant, and unless this is given a reply may not be received, because a physician who sells the good-will of his practice is in duty bound to sell to a man worthy the confidence of his former patients, and to no other man will he make known his intention of changing his location.]

UNUSUAL OPENING FOR SCANDINAVIAN PHYSICIAN

A Scandinavian physician is wanted to take a lucrative and very desirable practice in one of the most beautiful cities of Minnesota; about four hours from the Twin Cities; a large tourist resort. Physician leaves for good reasons, and makes no charge for his practice. He simply wants a good man to succeed him. Address S. L. A., care of this office.

ST. PAUL SPECIAL PRACTICE FOR SALE

Furnishings and most complete modern equipment in office centrally located, which has been used by a specialist in nose, throat, and ear work for 17 years. Have two year lease. Price, reasonable. Office attendant for six years desires to remain with new tenant. Those interested apply at once to Mrs. W. H. Vitum, 639 Fairmount Ave., St. Paul.

WORK WANTED IN FORENOON OR EVENINGS

A recent university graduate, with license to practice, wants morning or evening work in Minneapolis during the next six months. Address Box 1488, University of Minnesota.

Doctor: If you want practical post-graduate work during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797, Post-graduate Medical Dept., Tulane University of La.

REPORTED FROM STATE INSTITUTIONS FOR MONTH OF OCTOBER, 1910.

STATE INSTITUTIONS.

	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio-myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (t)	Puerperal Septicaemia
Fergus Falls, Hospital for Insane.....	20	3										8			
Rochester, Hospital for Insane	6			1											
St. Peter, Hospital for Insane	16	1										6			
Anoka, Asylum	2	1													
Hastings, Asylum	2	2													
Faribault, School for Deaf															
Faribault, School for Blind						1									
Faribault, School for Feeble Minded	4		1												
Owatonna, School for Dependents						1									
Stillwater, State Prison	1														
St. Cloud, State Reformatory															
Red Wing, State Training School															
Minneapolis, Soldiers' Home	8			1											1
Totals.....	59	7	1	2		1						14			1

CITIES.

CITIES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (?)	Puerperal Septicaemia	
Albert Lea	4,500	5,657	1	1														
Anoka	3,769	4,053	4		1									1	1			
Austin	5,474	6,489	5	2										1	1			
Barnesville	1,326	1,566	1															
Bemidji	2,183	3,800	9			1												
Blue Earth	2,900	2,364	12	1								1	1	2		1		
Brainerd	7,524	8,134																
Chaska	2,165	2,085																
Cloquet	3,074	6,117	5	3														
Crookston	5,359	6,794	16	2										1	4	2		
Detroit	2,060	2,149	6		1													
Duluth	52,968	64,942	80	5		5	1							13	6		1	
East Grand Forks	2,077	2,489	2	1														
Ely	3,712	4,045	2	1		1												
Eveleth	2,752	5,332	6												2			
Faribault	7,868	8,279	2													1		
Fairmont	3,440	2,955	0															
Fergus Falls	6,072	6,692	9			1		1						1	1		1	
Granite Falls	1,214	1,340	1	1														
Hastings	3,811	3,810	2					1										
Hutchinson	2,495	2,489	3			1										1		
Jordan	1,270	1,311	1															
Lake City	2,744	2,877	4			1											1	
Litchfield	2,280	2,415	5	1													1	
Little Falls	5,774	5,856	6			1		1										
Luverne	2,223	2,272	1												1			
Le Sueur	1,937	1,842	2															
Madison	1,336	1,604	3		1								1		1			
Mankato	10,559	10,996	10														1	
Marshall	2,088	2,243	1	1														
Melrose	1,768	2,151	5		1													
Minneapolis	202,718	261,974	280	28	3	29	2	9	5					1	11	27	18	2
Montgomery	979	1,281	0															
Montevideo	2,146	2,595	10	1		1												
Moorhead	3,730	4,794	1											1				
Morris	1,934	2,003	3	1		1			1									
New Prague	1,228	1,419	3														1	
New Ulm	5,403	5,720	1	1														
Northfield	3,210	3,438	2															
Ortonville	1,247	1,612	2															
Owatonna	5,561	5,651	5	1													1	
Pipestone	2,536	2,885	2															
Red Lake Falls	1,885	1,797	2															
Red Wing	7,525	8,149	7	1		2										1	1	
Redwood Falls	1,661	1,806	4			1												
Rochester	6,843	7,233	18						1									
Rushford	1,100	1,133	2															
St. Charles	1,304	1,238	2													1		
St. Cloud	8,663	9,422	14	2		1												
St. James	2,607	2,320	1															
St. Paul	163,632	197,323	162	19	9	12		14	1					5	8	11		
St. Peter	4,302	4,514	2															
Sauk Centre	2,220	2,463	2															
Shakopee	2,046	2,069	3															
Sleepy Eye	2,046	2,312	2			1												
South St. Paul	2,322	3,458	3	1														
Stillwater	12,318	12,435	6															
Thief River Falls	1,819	3,502	3											1	1		1	
Tower	1,366	1,340																
Tracy	1,911	2,015	1															
Virginia	2,962	6,056	16			2		1	1									
Wabasha	2,528	2,619	0															
Warren	1,276	1,640	2															
Waseca	3,103	2,838	3					1										
Waterville	1,260	1,383	0															
West St. Paul	1,830	2,100	2															
Willmar	3,409	4,040	1															
Windom	1,944	1,884	0															
Winona	19,714	20,334	15	1		2		1	2								2	
Worthington	2,386	2,276	2															

REPORTED FROM 65 VILLAGES HAVING A POPULATION OF 10,000 OR UPWARDS
MONTH OF OCTOBER, 1910.

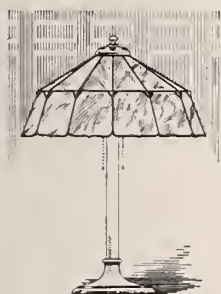
VILLAGES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Fox	Whooping Cough	Acute Anterior Polio-myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (†)	Puerperal Septicaemia
Ada	1,253	1,515	1														
Adrian	1,258	1,184	2														
Aitkin	1,719	1,896	1														
Akeley		1,635	4														1
Alexandria	2,681	3,051	1														
Appleton	1,184	1,321	1														
Belle Plaine	1,121	1,301	1														
Benson	1,525	1,766	4														
Breckenridge	1,282	1,850	1														
Buffalo	1,040	1,124	1					1									
Caledonia	1,175	1,405	1														
Canby	1,100	1,505	1														
Cannon Falls	1,239	1,460	2	1													
Cass Lake	546	1,062	1														
Chatfield	1,426	1,300	6									1		2			
Chisholm		4,231	1														
Dawson	962	1,056	2														
Delano	967	1,023	1														
Fosston	864	1,000	1	1													
Frazee	1,000	1,146	5			2							2		1		
Glencoe	1,780	1,805	2														
Glenwood	1,116	1,718	5	1													
Graceville	856	1,032	18														
Grand Rapids	1,428	2,055	3														
Hallock	805	1,014	1														
Hibbing	2,481	6,566	1														
Jackson	1,756	1,776	3	1		2									5	2	
Janesville	1,254	1,205	1														
Kasson	1,112	1,049	1														
Kenyon	1,202	1,252	1														
Lake Crystal	1,215	1,231	1														
Lanesboro	1,102	1,041	1														
Long Prairie	1,385	1,256															
Madelia	1,272	1,290															
Milaca	1,204	1,319	3														
Mountain Lake	959	1,063	1														
North Mankato	939	1,129	1														
North St. Paul	1,110	1,400	1														1
Olivia	970	1,019	1														
Osakis	917	1,056	1														
Park Rapids	1,313	1,719	1	1													
Pelican Rapids	1,033	1,095	1														
Perham	1,182	1,366	3														
Pine City	993	1,092															
Plainview	1,038	1,140															
Preston	1,278	1,320	1														
Princeton	1,319	1,704	1														1
Renville	1,075	1,229	2														
Rush City	987	1,041	3														
Rushford	1,062	1,040	2	1			1										
St. Louis Park	1,325	1,491	1														
Sandstone	1,189	1,589	1														
Sauk Rapids	1,391	1,552	1														1
Scanlon		1,122	1														
South Stillwater	1,422	1,572	1	1													
Springfield	1,511	1,546	2														
Spring Valley	1,770	1,573	2			1											
Staples	1,504	2,163	5	1													
Two Harbors	3,278	4,402	1														
Wadena	1,520	1,868	1														
Wells	2,017	1,814	1														
West Minneapolis	2,250	2,530	2														
Wheaton	1,132	1,346	3														
White Bear Lake	1,288	1,724						1									
Winnebago City	1,816	1,553															
Winthrop	815	1,031	2														
Zumbrota	1,119	1,129	59	7	1	2		1						14		1	
State Institutions			619	38	6	30	4	11	3	2		2	20	21	89	60	4
Other parts of State	1,012,328	1,085,886	1564	128	23	100	9	42	14	2		4	26	102	157	114	9
Total for State	1,751,395	1,979,658															

*No report received. Health Officer not doing his duty.

146 Still Births and Premature Births not included in above totals.

Your Credit Is Good at The New England.

A Pleasant Evening at Home



WHEN THE WINTER WINDS ARE BLOWING and the snow flying, who does not appreciate the comforts of the fireside; an Easy Chair, a Good Book, and Proper Illumination Effectively Distributed?

OUR GAS AND ELECTRIC PORTABLES TONE THE LIGHT AGREEABLY, and distribute it generously. Our Display comprises

Sizes, Styles and, above all, Prices to please Every Requirement of Good Taste. Our Display Rooms are Conveniently and Artistically Arranged, and, to one who has not inspected them, a visit will prove a surprising revelation of the Beauty, Scope and Magnitude of Our Stock.

OUR PRICES WILL SURPRISE YOU IN THEIR MODERATION. For instance: The Artistic Lamp illustrated in This Advertisement, with Verde Antique Standard 23 inches high, Leaded Art Glass Shade 16 inches in diameter in Ivory, Green and Amber Tones, corners of Panels set with Ruby Jewels. Equipped for Three Standard Lamps, distributing the Light generously in splendid color harmonies. THE PRICE BUT \$10.00.

IF INTERESTED IN LIGHTING FIXTURES for Home, Office, Church, Lodge or any place requiring Artistic, Effective Lighting Treatment, you should get into touch with Our Progressive Lighting Section. Your correspondence will receive the most painstaking attention.

NEW ENGLAND FURNITURE & CARPET COMPANY

Complete Furnishers of Homes, Offices, Hotels, Clubs, Churches, Theaters and Public Institutions.

FIFTH ST., SIXTH ST. AND FIRST AVE. S.,
MINNEAPOLIS, MINN.

PUBLISHER'S DEPARTMENT

A NEW LINE OF PARKE, DAVIS & CO.

"Everything under the sun for physicians" might be suggested as a motto not inappropriate for Parke, Davis & Co. The thought is prompted by the recent incursion of the company into the field of surgical dressings. It was something like a year ago, if we mistake not, that Chloretone Gauze and Formidine Gauze were launched in modest fashion, the purpose evidently being to let them find their way into the medical armamentarium in the natural order of events rather than by artificial fostering. Their reception by the profession must have been gratifying, for the line soon began to expand. Now it numbers six gauzes and tapes, and we note a disposition on the part of the company to bring them more prominently to the attention of physicians. For this reason a word or two in explanation of them may not be out of place.

The line includes Chloretone Gauze, Formidine Gauze, Formidine Tape, Adrenalin Tape, Plain Tape, and Anesthone Tape. What has been said of the therapeutic properties of Chloretone, Formidine, Adrenalin and Anesthone (and most physicians are well acquainted with these products) is applicable to the surgical dressings. Chloretone Gauze applied to raw surfaces exerts an anesthetic and antiseptic action, promoting the comfort of the patient. It is markedly useful in extensive burns. Formidine Gauze takes the place of iodoform gauze. It is more actively antiseptic, does not stain the clothing, is non-toxic, and is practically odorless. Formidine Tape, which comes in two widths ($\frac{1}{2}$ inch and $1\frac{1}{2}$ inches), is used for packing cavities antiseptically. Adrenalin Tape, supplied in $\frac{1}{2}$ and $1\frac{1}{2}$ inch widths, is serviceable in tamponing cavities to check hemorrhage. Plain Tape, which also comes in the two widths above mentioned, is used for packing and draining small wounds and cavities. Anesthone Tape is serviceable in the various forms of nasal hyperesthesia. All of the tapes are double-selvaged and when removed from wounds do not leave short threads to cause irritation.

Parke, Davis & Co. issue a small pamphlet descriptive of their medicated gauzes and tapes. Physicians who have not received a copy are advised to write for one. The dressings are pretty generally carried in well-stocked pharmacies.

MEDINAL, THE NEW HYPNOTIC

Writing in the Berliner klin. Wochenschrift of Nov. 8, 1909, the Preparatory Therapeutic Clinic of Prof. A. Fawitzki of the Imperial Military Academy of Medicine at St. Petersburg, Dr. G. Likudi reports his experience with Medinal (mono-sodium salt of the di-ethyl-barbituric acid).

The author welcomes the addition of Medinal to the already long series of known hypnotics because it offers all the advantages of the diethyl-barbituric acid (Veronal), which he and other observers have up to now considered as coming nearest to a much desired hypnotic capable of producing nearly normal sleep, but adds free solubility, the lack of which has limited the general usefulness of the acid and frequently even

made its administration impossible. He submits condensed histories of eleven cases treated at the Clinic and the important data of fourteen cases from his private practice, in the course of which he administered Medinal altogether eighty-six times, in the majority of cases per os, but several times also per rectum. Satisfactory results were almost always obtained with $7\frac{1}{2}$ grains of Medinal, and only in four instances (habitués of narcotica and excessive nervous excitement) 15 grains had to be given. In order to exclude the possibility of psychic influence, the drug was never made known to the patients as a hypnotic. At various occasions sugar was substituted on alternate evenings for Medinal, and the results carefully compared. Amongst the cases of agrypnia treated at the Clinic were: three cases of Neurasthenia cerebrospinalis, one of tuberculosis pulmonum, two of pneumonia chron. (tbc.), two pleuritis, one of pericarditis exsudativa, one of convalescence from typhoid fever, and one of arteriosclerosis with bronchitis chron. In the fourteen private cases the author dealt with five cases of neurasthenia cerebrospinalis, two of hysteria, two of anemia (chlorosis), one of morphinism (trigeminal neuralgia with narcotica habit), two of erysipelas faciei with very high temperatures, and two of asthma bronchiale in which the author's results coincide with those of L. Ebstein to the effect that the asthmatic attacks appear to be shortened and to become milder under the influence of Medinal. Author recommends further study of this interesting action of Medinal in a large number of cases, also of the apparent general sedative properties of the drug which have already been observed by Rabow, Ebstein and Pratoand of which he, too, has had favorable evidence.

Summarizing, the author's condensed impressions are as follows:

1. Medinal is a rather reliable hypnotic; administered 86 times, it has failed to give satisfactory results in only two instances (erysipelas faciei with temperatures above 102°).

2. Its action is mild; sleep ensues on an average after thirty minutes and has in the majority of cases a sound, restful character, with ready normal awakening in the morning. After-effects in the form of dizziness, sensation of "heaviness in the head" and head-ache were observed in eight persons and after 32 per cent of the total number of cases, but with exception of one case (hysteria gravis with tendency to migraine) passed off two to three hours after arising.

3. The hypnotic action of Medinal seems to be quicker in patients suffering from a general atony of the reacting organism, and slower in the presence of excessive nervous excitement, high temperatures and severe, painful coughing spells. The average duration of sleep under the influence of Medinal is from seven to eight hours with occasional short interruptions in the presence of cough or nervous irritation. It can be prolonged by the combination of Medinal with other suitable narcotica.

4. In addition to its soporific action Medinal seems to exercise a sedative influence on the nervous system and to render asthmatic attacks shorter and milder.

5. The average effective dosis of Medinal is $7\frac{1}{2}$ grains; only in exceptional cases 15 grains are required. The drug is tolerated equally well when administered per os (absence of dyspeptic effects) or per rectum (non-irritant).

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, FEBRUARY 1, 1911

No. 3

SOME PROBLEMS OF MEDICAL EDUCATION IN MINNESOTA*

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MINNEAPOLIS

It might seem inadvisable to take the time of a body like this for presenting a subject so much discussed among us as that indicated in the title, but so long as a problem, or related group of problems, remains unsolved just so long should discussion prove profitable. It is with the hope that a statement of the problems most acutely needing solution will stimulate consideration of plans for progressive work that this address has been prepared.

The Minnesota Academy of Medicine, made up as it is of representative men, is in a position to occupy the forefront of progress in a movement to better fulfill the obligations of the medical profession and to make our greatest state educational institution more than ever truly a servant of the whole people.

Minnesota has already acquired a unique position in medical education, because, first, the only medical school within our borders is the School of Medicine of the State University; the State, therefore, becomes the sole patron of medical education and is in a position to direct the trend and determine the character of medical instruction; second, in location and character the State University has been unusually fortunate, and the growth of the University has been one of the marvels of present-day education; and the features that make the location of the University a fortunate one are of special value in the medical school, since the two large cities afford a wealth of clinical material at close range and make it possible to locate the medical school on the University campus, thus keeping it in close touch with University progress and

ideals; and, thirdly, a serious attempt at abolishing sectarianism in medicine has been made and the medical school stands today in a position such that any useful, efficient mode of investigation or treatment may be introduced without question as to its source, and the medical school may be called a scientific school just as truly as any of the schools of pure or applied science, e. g., the School of Chemistry, the Engineering School, School of Mines, or the Department of Agriculture.

The considerations above outlined would lead us to examine with care the situation, to attempt in a broad way to solve our problems with a view to procuring the greatest good to the people of the State, and to safeguard the rights of the public in every possible way. I believe in this connection that there is only one way in which the medical profession itself needs to be considered, and that is that such safeguards be thrown about the admission to practice and about the continuance of the license that the public shall be protected against the ignorant, incapable, and dishonest individual. If the profession in this respect is well guarded in the future as at present the position which the physician occupies in the public estimation will take care of itself.

The special problems that I desire to consider at this time may be grouped under the following heads:

1. Undergraduate clinical instruction.
2. Graduate instruction, including a consideration of the need for university extension work among practitioners in medicine.
3. The education of the public.

*President's address, read before the Minnesota Academy of Medicine, Nov. 2, 1910.

4. Safeguarding the public against the ignorant or dishonest practitioner.

1. *Undergraduate clinical instruction.*—I have purposely left out of consideration at this time the question of laboratory teaching. I do this, in part, because the laboratories of our state institution are well organized and well manned and occupy a favorable position among similar departments throughout the country. They are able to secure material for teaching and investigation, and do not reveal the same need for extensive and far-reaching reorganization shown among clinical departments.

I shall not attempt any detailed criticism, largely because it is not so much the details but the broad basis of education which need reorganization, and were any criticism attempted it would have to be accompanied by so much of praise for what is now being done and for what has already been accomplished under decidedly adverse conditions that much time would be wasted. It is the broad questions of institutions and organization, rather than personnel, that need attention, and this can be given only briefly.

A start has been made in the right direction by the foundation of the University State Hospitals, with the Elliott Memorial Hospital as the center and first pavilion. The Elliott Memorial Hospital, however, does not fill the need: it only makes it more acute. To have efficient clinical instruction requires a large amount of material which is readily available and which affords an almost unlimited opportunity for investigation and research, particularly on the part of the teacher, but also on the part of the student.

It almost goes without saying that hospitals affiliated with the University, but not directly under the control of the teaching faculty, cannot fulfill the major need for clinical instruction. The arguments for this statement have been most ably stated in Abraham Flexner's recently published report to the Carnegie Foundation for the Advancement of Teaching.

The welfare of each institution, however, demands that the closest possible bonds be established between these affiliated hospitals and the University, as each can perform for the other a distinct and invaluable service. The hospitals can provide a training-ground, without prejudicing the welfare of the patients; the University can assure a standard and furnish a stimulus with the result that the interests of the patient are better guarded than in even a private institution in which no high-grade teaching is being done.

In the affiliated hospitals the primary purpose

has been to care for as many of the city's sick poor as can be done with the funds at hand; and the needs for laboratory equipment and thorough and complete investigation and instruction, have not been met in Minnesota as they have been in many places elsewhere. The teacher is tolerated in the hospital because he tenders his service as attending physician to the sick for the privilege of teaching his students. He is not there primarily for the purpose of investigation and teaching, and the time which he gives to the service is that time which he can afford to take from his practice without compensation. It becomes impossible to devote the proper amount of time to painstaking, systematic research, because preparation for and execution of his teaching function demand really more time than he has to give.

When the proper adjustment between clinical material, instructor, and student is established it will be about as follows:

The patient, ill, enters the hospital for the purpose of regaining his health. He partially compensates the hospital by allowing instruction. It cannot be said that he compensates the hospital by being the object of research. In the latter case the benefit is all his, because every patient is properly a subject for research, and the more careful, thorough, painstaking, and extensive the research the greater will be the knowledge of the patient's condition and the greater the probability of relief. The knowledge derived through this special study and investigation is of direct benefit to the patient, but should be so classified and arranged that it is of benefit to others as well. Hence, the research may at times be directed, not only to an understanding of the conditions in the patient under consideration, but to a solution of similar problems in other patients.

Keeping in mind the fact that the interest of the patient is paramount, the instructor should be there especially for the purpose of increasing the sum total of medical knowledge, that is, he should be a research student. In doing this he increases his own skill and becomes of greater value to the student-body. He should be an investigator and an educator, and not solely an instructor. This means that he must expect to devote a considerable portion of his time to the solution of problems of present-day, scientific medicine, and to do this he must be liberally compensated. The argument for this is patent, for the greatest need is for capable men who, if they were in practice, would assume leading positions and whose incomes would be com-

mensurate with their skill and success. We cannot expect such men to give considerable proportions of their time to the State without compensation. This subjects them to too strong a temptation to make their clinical teaching subsidiary and subservient to their private interests. Then, too, it is impossible for a man who has heavy demands of practice to approach such problems with that broad view and clear mind which the problems demand. Finally, the very fact that compensation is given makes it imperative that the interests of the teaching institution come first.

I do not contend that all clinical teaching should receive compensation, for an organization such as is contemplated in our medical school would afford unlimited opportunities for many men to spend limited amounts of time on special problems and along with this do a certain amount of research. The amount of teaching required would be more than compensated for by the opportunities for study and observation afforded, and many recently graduated and ambitious men would be anxious to secure such opportunities without financial return. The point I desire to make is, that the principal and chief clinical posts should be well compensated, and the men involved should be required to make their University interests a major rather than a minor factor in their careers. Such men would become of peculiar value to the community, and it would be unfair wholly to deprive the public and the medical profession of the experience and special training acquired as an investigator, but the function becomes, then, that of an advisor and referee rather than that of a practitioner.

We have educators in engineering, in agriculture, in pure science, in medical sciences, why not in clinical medicine, surgery, and the specialties?

In the past men have devoted much time to clinical teaching, and have done it well, purely for the love of the work or with a far-sighted realization of the benefits accruing through wider acquaintance and greater hospital advantages. The burden is becoming too great, however, and the necessity for division of labor too urgent. Back of all these reasons, and more insistent, is the fact that here in Minnesota, in our teaching relation, we cannot consider private interests, but have a right to think only of the welfare of the people of the State, which includes that of the University, wisely established as it has been for the benefit of the commonwealth. We are servants of the State. It is plain that the

major interest and the constant thought must be concerning the public welfare rather than any private gain.

For the student adequate provision must be made for observing and studying thoroughly the common, as well as most of the rarer, forms of disease, and all departments of practice must be covered. The student must be brought in close contact with the patient at the bedside, in the examining-room, or in the dressing-room, the operating-room, and, finally, if the fates are unkind, at the autopsy. This contact must, in large part, be daily and under the immediate supervision of the instructor, and the student must be afforded opportunities for working out the conditions in the patient, as well as determining data in the laboratory. The didactic lecture and amphitheatre clinic must play only a small part in teaching, for they afford very little opportunity for close observation and accurate demonstration.

When one considers the number of departments in which instruction must be given, and the number of patients who must be investigated and classified in order to cover even approximately the field of medical experience, it is evident that the number of beds needed is large. With a student-body of two hundred and fifty, a teaching hospital equipment of four hundred to five hundred beds is a reasonable minimum. Below this number the variety of material becomes too limited, and the concentration of student instruction upon individual patients becomes too great, so that the patients' welfare, as well as that of the students, demands an adequate number of beds.

When, as in Minnesota today, the hospital is not only an invaluable teaching institution but also a tremendous economic weapon in the hands of every county and every community in the State, affording opportunities for restoring to usefulness many who would otherwise be public charges, we see that the arguments for enlargement and adequate equipment and maintenance, become irresistible. I refer here especially to the needs of the University Hospital itself, and not to the total number of beds in affiliated institutions. A thousand or fifteen hundred beds in these associated hospitals would afford a breadth of clinical material which would be a splendid adjunct to the main teaching-hospital, and yet would not place the teaching burden so heavily upon the shoulders of these affiliated institutions that teaching would be a nuisance.

Manning such hospitals by a corps of men trained in the central institution, the University Hospital, or institutions of similar grade from other parts of the country, would be a splendid stimulus to these other hospitals, and would result inevitably in a high standard of equipment and work and a spirit of work for work's sake which would place these institutions on a level much higher than they can hope to occupy with our present organization.

2. *Graduate instruction and need for university extension work.*—A problem which needs consideration, and toward which some definite movement for its proper solution must be instituted, relates to some system by which extensive facilities for graduate instruction in medicine may be secured. By this I do not mean that period which immediately follows graduation in a certain percentage of students and which might be called the period of internship. A movement for compulsory hospital residence as a prerequisite to the diploma has already been instituted in the University of Minnesota, and students entering in 1911 will be required to fill a year of residence in an approved, accredited hospital after completing the regular course and before the diploma is granted. I have in mind some system by which the physician may be reached and kept in touch with the progress of medicine during the period of his active practice. Some men are able to keep well abreast of the more essential elements of medical progress even though actively engaged, but few men are able to do this in the isolation of practice in the smaller communities throughout the state. That brilliant exceptions to this rule exist does not discredit the truth of the statement, but rather emphasizes the point which I hope to make.

We can expect the public to judge as to the state of knowledge in the medical profession only by the average practitioner, for he constitutes the bulk of the profession and its mainstay. The tendency has been for medical knowledge to diffuse slowly, even to the members of the profession and much more slowly to the public. This, however, bids fair to be a thing of the past, and the public is becoming today much better informed and much more discriminating. The advances which are recorded in medical literature are so many and various that no single individual can keep absolutely abreast of progress, even in his own special work, either as a teacher or in research or practice, and it is manifestly impossible for the general practitioner

who is isolated and driven by the demands of daily routine to keep anywhere near up to the best that the practice of medicine can give.

We believe that the situation in this respect is as favorable in Minnesota as in any other part of the Union, but it is too common to see a man in 1910 practice medicine as he was taught in 1900, 1890, or even 1880; and it is to help the man who graduated at these earlier periods to practice the medicine of 1910 and subsequent years as they pass that some plan should be adopted. The public deserves the best we can produce. We can and must reach the public mainly through the individual member of the profession, and to my mind it is unfair to the practitioner and still more unfair to the public to allow our present inadequate methods of graduate instruction to continue.

Some clearing-house must be provided in which published statements are tried out, and in which the truth or falsity of reputed advances may be approximately determined. It is with the hope that something may be done to establish this clearing-house and to bring the general practitioner into touch with it that these suggestions are made.

Returning to the topic of the University Hospital, we see that this is the logical ground for such a clearing-house and the logical center for a system which would probably include many hospitals in which graduate instruction can be provided. This, of course, means that the practitioner must be brought into touch with the hospital, and such provision made that while away from his practice his time can be filled with opportunities for study and instruction. I do not believe, however, that the effort to reach the practitioner should be limited to an effort to bring him to the hospital, but a more comprehensive scheme, which might have some of the features of a correspondence-school and some of the features of university-extension work, appeals to me as a logical adjunct to the arrangement suggested.

As at present conducted the University Hospital affords an opportunity for coming in contact, one by one, with those physicians in the state who will and can co-operate, and in this connection a valuable opportunity is afforded for keeping the physician in touch with the work done upon his individual patient in the hospital. But this means is too slow and too inadequate to be of value except as an introduction and a source of stimulation. To keep the practitioner in touch with the work of the hospital at all

times would be a logical undertaking and one which, when adopted, would be recognized throughout the state as the assumption of a duty, and not as an attempt to further any private interest. In this respect our situation is unique and demands the utmost wisdom and care in planning for the work in order that its purpose may be clear.

You will recall that in discussing undergraduate instruction I insisted that the relation of the attending physician to his work should be different from that in any other hospital, and that, in order to make this possible, he must become a salaried instructor. The same reasons apply here that were given there, and this relationship to his work makes it possible for him to assume the duties of graduate instruction with greater efficiency and without the temptations and the drawbacks which obtain in much of our so-called graduate instruction in America today.

It would be impossible to discuss the exact details of the plan here, but the broad features are of such importance as to demand consideration at this time, in order that many minds may be active in considering the details and in bringing the needs for such a system before the proper bodies, i. e., the public, the medical profession, the regents, and the legislature. The best which the knowledge of today can give is none too good for the people of Minnesota, and if we fail to point the way for them they of themselves cannot secure it.

3. *The education of the public.*—The possibility for adequate public instruction concerning the science of medicine of today is dependent upon the scheme already outlined. A serious bar to the fullest frankness between medical men and the reading public has been the fact that most of our members have been dependent upon public recognition for their living, and sentiment, which has many good reasons for its existence among medical men, is against the practitioner becoming, in any true sense, a public man. There are too many opportunities for self-aggrandizement, self-laudation, and advertising and the advertising physician is very properly an object of abhorrence among his fellows.

This has resulted in a condition which cannot much longer be tolerated and has prevented the widespread recognition of the marvelous advances made and making in the medical science of today. One hopeful aspect is developing in connection with public-health work in that there is an increasing number of men trained in medi-

cine who do not depend upon practice for an income, but who hold salaried positions and are, therefore, enabled without criticism to become public instructors. I believe, however, that it is necessary and advisable for the medical profession, as well as the profession of public-health, if we may so call it, to assume the function of teaching the public. One great reason for this is the tendency for the profession of public-health to draw more and more on non-medical sources, as engineers, chemists, statisticians, etc., with the result that many public-health officials do not have the physician's point of view, and with the result, also, that those physicians who become health officers must of necessity adopt a view-point in instruction more limited than that which would cover all of medical progress.

The aims, the scope, and the limitations of medical practice must become more a matter of common knowledge if we are to be able to serve the community as we should, and it is only by means of the development of a corps of public instructors, unhampered by the criticism of to-day, that this can be accomplished. Just how this can be worked out in connection with the outline already given I do not know, but I am certain that the proper center for such a corps is in the State University. We must not lose sight of the family physician and the specialist, as teachers and guides, but this would be to them a stimulus and source of inspiration and help.

4. *Safeguarding the public against the ignorant or dishonest practitioner.*—This brings us to one of the fields in which consideration is most difficult and about which the greatest difference of opinion and the greatest opposition center. If we read the present state of public opinion aright it would appear that we are welcome to devise any standard which we choose, no matter how high, but that we must refrain from insisting upon a like standard with others who desire to practice any form of healing art. To us the injustice in this attitude is clear, but the reason for its existence is still difficult to fathom. A considerable number of individuals do not see why any definite standard of preparation or scientific honesty should be demanded. This is, I believe, largely due to the fact that the public has been convinced in the past that sectarianism was as much a necessary part of medicine as of religion, and that the medical sects, so-called, stood upon ground very similar to that occupied by the various sects of religious belief. I suspect that sects will continue to arise, and there is no reason why we should attempt to

hinder or suppress them. They will continue to fall, lacking that essential of permanency, a scientific foundation.

There are many reasons, however, why sectarianism should have no place in the requirements for the practice of medicine. By this I mean that the interests of the public demand a certain standard of preparation for practice. Because a man proclaims loudly that he possesses peculiar skill in diagnosis or treatment is no reason that this is so; it is usually the reverse. But if each man who is allowed to make his living in the pursuit of medicine or to receive, in any way, compensation for advice on matters pertaining to human disease and disorder were required first to possess a definite amount of scientific preparation a large part of the ignorant, unskilful, disastrous practice on the part of quacks and irregulars would be eliminated. To one who attempts to practice medicine honorably, as well as honestly, the terrible devastation from unfitness for the practice of the healing art is appalling, and there must be some way by which knowledge of the facts can be brought to public attention. At present most attempts along these lines are looked upon by the public as instances of professional jealousy and as evidence of a desire to arrogate to our own profession all opportunity and knowledge in the art. I am convinced that at least in the past the fault has been partly, if not largely, our own; and if this is true we must depend upon ourselves to provide a solution. The solution is dependent on a recognition of the facts, and while volumes might be written on this subject a concise and simple statement would seem to me more advisable.

The facts are these: The medical sciences consist, roughly, of a group comprising anatomy (with its related branches of histology and embryology), chemistry, pharmacology, physiology, psychology, pathology, and bacteriology; and these subjects comprise fields such that a man with a scientific mind and training in any of the other branches of science, can recognize that each one comprises an immense body of fact repeatedly demonstrated and demonstrable by anyone capable of scientific analysis, and, like all fields of science receiving accessions of knowledge day by day as new methods are adopted and old methods are applied to new fields.

Concerning this ground there has been no real dispute, for practically all of the so-called schools or sects in medicine have voluntarily or

by compulsion accepted them as part of their training, or at least avowedly so.

When, however, we leave the fundamental branches above and pass to a consideration of the methods to be used in the investigation and treatment of disease we find that differences of opinion in the various so-called sects arise, and it is in this field of so-called clinical medicine that sectarianism is most apparent. To enumerate all the sects or attempt to catalogue all the theories which lie at their foundations would be absurd. What I desire to do, however, is to emphasize the fact that, while the difference between the fundamental branches and clinical medicine may appear considerable, yet in fact the clinical medicine of today is simply the application of the principles proven in these fundamental sciences to the examination and treatment of disorder in the individual. A few isolated illustrations may suffice to show my meaning.

We do not treat diseases of the stomach by cataloguing a series of symptoms and then by administering some foreign substance as a drug with supposed curative effect. The logical and accepted procedure is not only to determine by careful examination and analysis the state of the digestive processes and motor-function of the stomach, but also to examine thoroughly into the general condition of the patient and to search, both in his history and in his physical condition, for evidence of a primary source for the disorder.

When this cause has been found its recognition, location, or elimination provides the clue for treatment, and the treatment of the prime cause then becomes a large part of practice in such a field.

It is still often necessary to consider and to treat symptoms, for we recognize that the ultimate goal is the relief of the patient, but we do not rely in any degree upon so-called specific-drug treatment for a cure. Careful observation over many years has led to a recognition by the profession of certain specific curative remedies among the drugs we use, but observation has also shown that the field of specific medication is extremely limited.

The demonstration of specific parasitic causes for certain diseases has led to the recognition of a considerable field in which antitoxic sera may be said to act in a specific manner, and the field of curative and palliative serum-therapy is broadening rapidly. Here, too, we recognize distinct limitations, but we do not know yet what the limits of this field may be. We still

hope that immense additions will be made to our knowledge in this direction, and the results recently obtained in cerebrospinal meningitis through the efforts of the Rockefeller Institute have renewed in us belief in still further advances.

The surgical field is one in which such immense strides have been taken and such marvelous results secured that it is extremely uncommon to find an intelligent individual who does not acknowledge the benefits of surgical procedure, and nearly all the sectarians themselves advocate, or desire to use, various well-known methods of the practice of surgery. This is quite as true of the anatomical specialties that have arisen as branches from the main stem, e.g., diseases of the eye and ear, nose and throat, genito-urinary apparatus, etc. Again, the benefits of scientific, aseptic obstetric practice are so great, and the number of mothers and children saved so evident, that the marvel is that public sentiment itself has not stepped in ere this to demand qualifications for the practice of mid-wifery such that all classes may have the opportunity for clean and relatively safe accouchment.

No attempt has been made to cover the field by these illustrations, and this review has been so brief and sketchy that the point I desire to make may have been missed, but what I have tried to say is, that there is a science of clinical medicine, clinical surgery, and the specialties which is just as much a science, just as capable of scientific analysis and demonstration, as are any of the so-called fundamental branches; that in this science dogmatism has no place; and that, too, the requirements for the practice of medicine should include these subjects, as well as the fundamental branches given previously, and should demand a high standard of preparation.

It would seem absurd to found a separate school of engineering because some genius had discovered or demonstrated a theory of stresses different from that now commonly held among engineers; or to found a separate school of physiology because some gifted mind had demonstrated a theory of nervous energy entirely at variance with that now commonly held; or to found a separate school of chemistry upon the recent demonstration of the radio-activity of matter: and yet it is a basis no more logical than this that forms the foundation for the differentiation of the various sects in medicine.

A scientific fact is capable of demonstration, and an analytical mind will accept the fact. We are still dependent upon theory to form the basis

upon which progress can be made and additional facts placed, but we separate that which is fact from that which is theory, and recognize the field of usefulness of each.

We do not always agree regarding theories, and it is fortunate that this is so, for then various theories would not be tried out with the resulting accessions to the mass of fact. Because we differ in theory, however, we need not lay aside the common basis of fact. While recognizing that immense fields of knowledge still remain to be explored, and hoping that new facts may be discovered that will give mankind advantages never dreamed of, we must still recognize that it is only by determining, recognizing, and insisting upon the great fundamental, scientific facts that we can provide a basis for further progress.

Our structure must be solid as we go, and no unproven thing, no dogma must go into the foundation.

It is training in this great field that is demanded for the public weal. No man should be allowed to practice any form of the healing art who is not thoroughly grounded in the primary and clinical sciences. We can well afford to urge one who is thus trained, who is honest, industrious and progressive, to use any method of investigation or treatment which accomplishes the result desired; and to publish to his fellows anything of value he has acquired.

The problem lies in convincing the public that its own interests demand the standards we demand, and this requires that public attention be aroused and public intelligence be directed to a solution of the problem.

No state in the Union is so favorably situated for a campaign of education along the lines laid down as is Minnesota today, and to my mind the best mechanism is provided in that institution which occupies so large a place in public thought and is so much an object of pride to the citizens of the state, our University.

The interests, not only of the State of Minnesota, but of the Northwest, demand that we apply ourselves definitely to this work and do not rest until a solution expressing the present state of knowledge is afforded, and until institutions are provided and organizations effected that shall not only put Minnesota on a par with the most progressive communities in the known world, but shall help this State to be in the forefront of progress in medicine as she has been in so many of the other affairs of the nation.

Last of all, we must not lose sight of a great need becoming daily to us more apparent, but

one to which the public is today scarcely aroused. It is the need for continuous, concentrated effort in the conquest of disease. By this means the Rockefeller Institute has been able to abate the terrors of epidemic cerebrospinal meningitis and to lay bare the secrets of poliomyelitis. These are only the most striking results obtained by that marvelous institution in the short years of its existence, but they alone justify the total expenditure.

Minnesota in her natural resources has an endowment greater than that which could ever be supplied through private munificence. The conservation of the public health, the control and elimination of the terrific economic waste of preventable disease, the cure and restoration of the physically incapacitated, are problems demanding and deserving public attention and support to a greater degree than any other problem that

the State has yet undertaken, and must become as much a matter of common interest as are intensive agriculture or the preservation of our natural resources.

Could any State spend millions to better purpose than in just such work for her citizens and the nation as is done by the Rockefeller Institute and similarly endowed organizations?

Mr. Rockefeller's gift will have increased in value tenfold if it does no more than teach the states and the nation to value and adequately support intensive medical research. Every adequately equipped agency adds, not in arithmetical, but in geometrical, ratio to the conquest of disease.

I believe that the Minnesota Academy of Medicine has reason to be proud of its position as the first to found a research fellowship in the medical school of the University of Minnesota.

THE MANAGEMENT OF THE PUERPERIUM*

By FREDERICK LEAVITT, M. D.

ST. PAUL

I have chosen to speak on the subject of the puerperium and its management, for the reason that I believe it to be a very important part of obstetrics, yet one that is commonly slighted by the general practitioner and is generally misunderstood by the laity.

That you may not be misled, I wish to state at the beginning that many of the conclusions arrived at are my own, rather than a summary of opinions gathered from the literature on the subject. Text-books state things somewhat dogmatically, and do so of necessity, for the student must have rules to go by. From experience we learn the variations, and draw our own inferences.

From the very beginning, the puerperal period is accompanied by dangers. Directly after labor is completed the birth-canal becomes an inviting field for many forms of infection; and, added to this menace from without, is the element of resistance on the part of the patient, who may not herself be in the best of physical health. Right here we have to acknowledge that there is still a great deal of mystery about puerperal infection. To me it grows more and more perplexing. If mere dirt is dangerous to life, I cannot but wonder why more of the cases attended by midwives, who very commonly have no conception of

asepsis, do not die from septicemia; and, what is still harder to explain, is the morbidity and even death of some of our own patients when cared for after the most approved and painstaking technic. However, this is a topic too grave and too lengthy to discuss at this time. In our present view of the subject we shall assume that the patient is free from infection.

First comes the consideration of uterine contraction and hemorrhage. Shall we administer ergot? As a routine practice, I see no necessity for its use, and I seldom give it. A little watchfulness on the part of the accoucheur, to see that the uterus contracts normally, will prevent hemorrhages more effectually than ergot alone. I would say to the timid or inexperienced, if you become alarmed, give ergot, since no harm follows upon its use, but do not place too much confidence in its effectiveness.

I would also eliminate the douche, both before and after delivery. The occasion has never arisen in my practice when I believed it indicated. As a prophylactic measure its value is doubtful. Even should you know for a certainty that the vagina was infected with gonococci, an antiseptic douche would not obviate the necessity for the further treatment of the baby's eyes. The post-partum douche seems to be a thing of the past. Nature has furnished, as it were, sentinels, and even fighting soldiers, to combat the enemy on every hand, particularly at the por-

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

tals of the vagina. To wash away these protective bodies or destroy them with poisonous lotions seems to favor rather than discourage infection.

If there is obvious trauma I refrain from further examination at the time, preferring to investigate and repair all lacerations at a subsequent period. This, too, is a subject that might be discussed further, and I shall only say, in passing, that unless the injury is very slight, it pleases me better to wait two or three days before operating. Perfect results have been obtained as late as five and even seven days after labor. The advantages of delay are less edema, less hemorrhage, and less confusion. One stitch deeply placed is better than several superficial ones; and silkworm rather than catgut is to be preferred.

The toilet of the puerperium needs only to be clean to be safe. Antisepsis will not take the place of asepsis. An ounce of soap judiciously used will, I venture to assert, save more lives than any amount of bichloride used without it. A dirty doctor is a menace to the community. Such an one will try to make himself and others believe that his patient died because of a retained shred of membrane. The sooner we learn that infection comes from without, and not from within, the sooner we shall put into practice surgical principles in the conduct of labor.

There is one injunction to be found in every text-book on obstetrics with which I am heartily in discord, and that is that the lying-in patient should remain quietly in bed until involution is completed. I followed this advice for years, but gradually came to believe that activity rather than passivity favors the process. So I encourage my patients to take up their normal habits very soon after delivery, and for some years I have tried to get them up and about the house within five to eight days. I say "tried," because I have not always been successful. It is harder to introduce new ideas into the practice of midwifery than into most other branches of medicine, which is explained, I presume, by the traditional notions handed down from generation to generation concerning this old but interesting subject of procreation. If I should direct a patient on whom I had just ligated the aorta, we will say, to saw a stick of wood, it might be that the work would be undertaken, but I might have great difficulty in persuading a woman to leave the bed on the ninth day of her puerperium, so strong is the superstition that some evil may attend.

On the day of delivery I have the patient get out

of bed onto a jar or commode by the side of the bed to empty the bladder. I allow her to be propped up from the first meal on, and, unless there be some other reason for a regulated diet, I tell her to eat whatever her appetite fancies or the bill of fare affords. On the third day she may sit up in a comfortable chair for an hour, both morning and afternoon; the next day, twice as long. As intimated, it is difficult to get patients to follow directions. Sometimes it is the husband, sometimes the mother, or it may be friends, acquaintances, or even the nurse who contribute to her growing fears by advising or suggesting what they believe to be the proper thing to do. Indeed, it is little wonder that women become imbued with strange ideas concerning conception, pregnancy, labor, and the puerperium. I refer particularly to the puerperium. Soon after the baby is born the mother is made to feel that she has passed through a very serious operation, and that her case was exceptionally hard. She must now be quiet, the shutters drawn, everyone must whisper and step on tiptoe, and for ten days or more she shall refrain from making one spontaneous natural effort.

I love to tell such people the story of that remote country where the custom is to put the father to bed and lavish upon him all the attentions while the mother arises from her couch of travail and without noticeable interruption pursues her housewifery duties. And of the Indian woman who drops by the wayside, bears her baby, washes it in the running water of some near-by stream, performs her own cleansing, jumps back onto her pony and catches up with the rest of the band as best she may. Can anyone disprove the statement that primitive women enjoy exceptionally good health?

To me activity seems rational, and I know from observation that women who resume their natural habits early after parturition make the quickest and most normal recoveries. And why shouldn't they? The process of childbirth is a physiological one, and in many instances hardly to be called a painful one. Because the uterus is large, and the pelvic vessels and adjacent tissues relatively hypertrophied, is no proof that involution is favored by passivity. On the contrary, movement in bed, the turning from side to side, and the occasional sitting posture, must obviously favor drainage and aid in the restoration to normal of such tissue. Many times have I noted that the puerperal woman, if she continue inactive, shows less and less inclination to exert herself, and really grows weaker as the days go by, which is

all very natural. Put a well person to bed, cover him up warmly with blankets, give him sloppy food, make him lie still for a week, and he, too, will complain of *bachache* and headache, and a wobbly feeling in the knees when he attempts to walk.

I repeat: Normal labor is not a malady, and it should not be treated as such. Tell your patients to forget it, and to go on eating, sleeping, and behaving quite the same as before the baby came. Several hundreds of women have followed this plan under my observation, and in no instance have I had occasion to regret letting them up too soon. And, furthermore, my attention has never been called to a case where disability following parturition could be directly chargeable to wholesome exertion, or to the too early resumption of accustomed habits.

DISCUSSION

Dr. J. C. Litzberg (Minneapolis): When Dr. Leavitt spoke of puerperal sepsis I could not help but think that the treatment of the puerperium must begin before labor. From six to seven thousand women in the United States die every year from puerperal sepsis. The usual treatment of puerperal sepsis is injurious, therefore the prophylactic treatment becomes most important. To frequently examine a woman before labor and then expect her to get along without sepsis, is improper treatment of the puerperium.

I cannot quite agree with Dr. Leavitt's statement about *ergot*. I do agree that with a little care *ergot* will not always be necessary, for you do not always know in which case you are going to get hemorrhage. It is a fixed idea of mine that post-partum hemorrhage is almost always due to neglect. I have never seen a

case of post-partum hemorrhage immediately after delivery. If the uterus is watched properly, as Dr. Leavitt advises, there will be no post-partum hemorrhage, but it must be constantly watched, and that does not mean it must be constantly massaged.

I can heartily agree with him on the use of the douche, for it is one of the greatest abuses in the practice of obstetrics today. It has not been abandoned, and sepsis is invited, first, by an ante-partum douche and then a post-partum douche, neither of which is necessary, and they are absolutely dangerous.

I can partially agree with him on the early-rising proposition, but when he broaches that subject he broaches one concerning which there is a great deal of controversy. Perhaps the controversy is one of the "progressives" against the "stand-patters." It is hard to introduce, as the doctor says, new methods in the practice of medicine, even harder than it is in politics. He carries the early-rising idea a little bit farther than I do, but I agree with him with certain modifications. I allow my patients to sit up immediately after delivery when it is necessary to urinate, or sit up in bed early, but I do not allow them to walk out quite as early. I think there is today a tendency to modify this idea of keeping a woman in bed two weeks or more, and there is a consequent advancement in the treatment of the puerperium. I am reminded of one case of sapremic infection caused entirely by the woman lying in bed on her back. I was called to see the woman who had a rise of temperature, rapid pulse, anxious face, and every indication of sepsis. I made an intra-uterine examination and found that there was nothing but lochia retained in the uterus. If there is anything retained, I usually clear it out with my finger, not with an instrument, and wash the uterus out once only. In this case I found the trouble was due to lochia, which had not been drained out of a retroverted uterus on account of the woman being kept flat in bed. The only thing done was to let that lochia out and set the woman up in Fowler's position.

DEATH-CERTIFICATES: A REVIEW OF THE SUBJECT AS VIEWED FROM THE POST-MORTEM ROOM*

By H. E. ROBERTSON, M. D.

MINNEAPOLIS

It would seem to be "carrying coals to Newcastle" to talk about death-certificates to a group of physicians, for perhaps in times past the filling in of the blanks entitled "causes of death" has seemed a simple and yet a particularly pestiferous task, and that was all there was to it. We have not worried much about whether our given cause was primary or secondary, or whether the foundation of our opinion was clinical examination, operation, laboratory test, autopsy-findings, or mere more or less logical guesses. Generally the diagnosis was accepted; occasionally, a letter from the board of health asking for more ac-

curate data has aroused our ire,—we never did stand criticism well,—and in the main we have allowed this nominal duty to trouble us as little as possible.

In the meantime the various bureaus of vital statistics of the city and state boards of health and the Census Bureau at Washington have zealously catalogued, filed, cross-indexed, and "statisticated" in many wonderful, interesting, and valuable ways the information obtained by these certificates. They have studied them in their offices; they have discussed them in their public meetings; they have written long reports and learned treatises about them; and in every useful manner possible to imagine they have digested this information and at all times have been ready

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

to give the results to any who might be interested or in need of them. Standard forms of death-certificates have been devised after careful consideration and much painstaking study of the question by public health associations and the Census Bureau officials. By gentle urging, many states and large cities (among them Minneapolis), have been led to adopt this form, and thus further a movement toward some uniform and universal system of collecting these much-used and somewhat-abused facts.

In all this work our rather minor portion has been the careless filling in of a few blank spaces and our only recognized connection with any bureau of vital statistics has been the occasional formal letter of protest against our modest surmise that the patient died of "some general disease," or, perchance, of "marasmus."

Rarely has the subject been dealt with among physicians as it deserves. Little, if anything, is taught about it in the medical schools, and as a subject for discussion before the State Medical Association it is about the last thing to hold our interest and attention. In short, either the subject is of little or no importance, or it does not receive the earnest consideration it deserves. Surely, before an intelligent body like this no argument in favor of complete, accurate, and carefully collaborated vital statistics would seem to be necessary. The ideal state must record the birth, the disease, and the causes and date of the death of each one of its citizens with the same fidelity that it records transfers of land or the penalties of the law. It is only in this way that general surmises can give place to facts proved by accurate records in regard to the length of life, the increase or decrease of communicable affections, the healthfulness or banefulness of certain regions, and the progress or non-progress in curbing the prevalence and fatality of disease. In a bulletin issued by the American Medical Association in January, 1909, this subject is forcefully discussed as follows:

"In the last analysis human life and its perpetuation is the predominant factor in all problems whether personal, social, state, or national. The standing of a nation, ultimately, is only to be measured by the standard of human lives. These general principles have long been admitted by all statesmen and economists. In spite of this, it comes as somewhat of a shock to one to realize that in a nation where a record is made of every legal procedure, of every business transaction and commercial liability, no matter how insignificant, where millions are spent each year in recording

and preserving all real estate transactions, where, in short, everything else, material or immaterial, is made a matter of record, yet in more than half of the United States a human being can be born and die without any record being made or official notice being taken of the fact. Elaborate and carefully worked-out systems record the birth, entire career, and death of every pedigreed horse, cow, dog, and even 'blooded' cats, yet children are born and men and women die without the slightest record of these events being preserved. Careful record is kept of acreage and crops, as well as of all diseases of plant and animal life. The total wheat production of a state or of the United States is recorded to the last bushel. In case of sheep-rot or hog-cholera, the disease is instantly reported, carefully studied, and rigorously exterminated, yet there is probably today not a single state or city health officer who can do more than guess at the number of cases of tuberculosis existing in his jurisdiction, while in more than one-half of the United States it is even impossible to tell how many persons succumb during any length of time to this or any other form of disease."

If these statements were not sufficient, one has only to glance at the large volume on mortality statistics issued by the U. S. Census Bureau to realize the vast importance of this subject. And yet their facts are admittedly few and the returns they represent are often glaringly inaccurate and misleading. Whose fault is it? I am not going to attempt to answer that question. In the first place, I do not know, and, in the second place, I have a suspicion it is rather the fault of the whole system of medical organization than of any individual lack of interest. The importance of the subject is not impressed upon us in our medical education; we rarely hear it discussed in our meetings; and still more rarely is there any co-operation between bureaus of vital statistics and medical associations in regard to what is the best procedure and how it may best be carried out. They may send us an occasional stereotyped request for more data, sometimes adding other comments that make us mad, or they may condole mutually on the ignorance or stupidity, etc., of the average practicing physician—a habit, by the way, in which we ourselves are prone to indulge and thus dirty our own nest. *That is not the method to accomplish anything.*

This same average physician represents more than the average intelligent, broad-minded, and patriotic view of public questions, and can always be induced to take the lead in any move-

ment which makes for the betterment of the human race.

Two questions now remain to be considered: First, what is the exact trouble with death certificates as ordinarily filled out? Second, how may this trouble be remedied?

A few illustrations chosen from two different sources will demonstrate sufficiently clearly the answer to the first question. In a pamphlet issued by the Census Bureau and intended as a guide for physicians to use where doubt arises as to the correct wording of the cause of death, the following examples chosen at random will illustrate *some* of the troubles.

Under influenza the advice reads: "Only genuine influenza should be reported as such. Do not use the term to cover every affection of the respiratory system."

Under tumor: "Do not write 'tumor' when some form of cancer is meant. Always state the organ or the part of the body affected."

Heart failure: "This return, with all its worthless synonyms, as 'cardiac asthenia,' 'cardiac debility,' 'cardiac paralysis,' etc., should *never* be accepted as the sole cause of death. What disease caused the 'heart failure'? The heart always 'fails' before death from any cause. If organic heart disease is meant it should be so stated."

These are self-explanatory, but more pertinent still are illustrations from our second source, namely, the actual certificates on file at the office of our State Board of Health. The following returns are a few of those which the clerks in the vital statistics division find it difficult to properly classify: "Sarcoma" and "carcinoma," with no mention of location; "brain fever" and "lung fever," obviously obsolete terms; "accidental injury," with no statement of the accident; "cardiac embolus following operation," the operation not being indicated. These are common occurrences. A few more bizarre returns represent the extreme. For example, one physician concludes that a child died of "infancy," and another naively remarks that the patient met his end by "coughing since he was born but harder since."

These references might be indefinitely repeated but a sufficient number have been given to show what difficulties our health officers encounter.

On the other hand, we ourselves have honest difficulties for the solution of which we often appeal in vain to these same particular health officials. For example, in death from a disease, evidently "meningitis" of some type, how can we be sure without autopsy or laboratory examination

of spinal fluids (not always possible in a country practice) whether the cause is the meningococcus streptococcus, or some other allied organism? In a case of typhoid fever dying of bronchopneumonia, is the principal cause of death typhoid fever or bronchopneumonia, and what is the secondary cause? What is meant by *principal* or *primary* cause, and what by *secondary* or *contributory* causes? These perplexities may be multiplied indefinitely in the mind of each one of us as we think over possible cases.

The difficulties, then, are fairly clear. What is the remedy? In a movement of this kind, as in all other progressive movements, there can be no single remedy—no patent remedy—which will clear away all defects. At the best we can only confer on suggestions, act on what seems best, and each one individually perform faithfully his own part according to the standards adopted by such conferences.

My own suggestions are four in number:

First, provide for some instruction in the subject in our medical schools.

Second, make more frequent use of clinical and laboratory tests in the study of our cases. Autopsies are far too infrequent. While they do not always clear up the case, they constitute a most valuable court of last resort. Lumbar-puncture fluids will clear up our meningitis cases, Widal's the typhoid, etc.

Third, use more care and thought in filling in the certificate. As I understand it the standard form requires a "cause of death" and "contributing causes." These may often be determined by the following rule: When resistance has become so lowered by some definite recognizable disease that other definite affections ensue and the patient dies, then we have a cause of death in the first disease and a contributing cause or causes in those that follow. For example, in a case of acute diffuse nephritis dying of bronchopneumonia, the cause of death is "acute diffuse nephritis," and the contributing or secondary cause is "bronchopneumonia." This may seem like putting the cart before the horse, and there is plenty of room for active and oftentimes heated argument on the question. I am only endeavoring to interpret what it is fairly well agreed the standard form of death-certificate requires. If this is wrong, then let us change it, not by violent or ill-defined personal opinions, but by a reasonable and comprehensive view of the whole question, by committee conference, and by such other recognized agencies as we are accustomed

to adopt when we are agreed that some action ought to be taken.

Fourth, and lastly, frequent consultations are necessary between boards of health, other statistical bureaus, and medical associations, in order to maintain a uniform standard and promote bet-

ter working relations on this important subject. We are, in these days, taking high ground on all matters relating to public health, and we are certainly not going to be backward in rendering more accurate and valuable our records of vital statistics.

BOOK NOTICES

MEDICAL CHAOS AND CRIME. By Norman Barnesday, M. D. Mitchell Kennerley, London and New York. 1909. Pp. 584. Price, \$2.00.

To say that this is a very remarkable book is stating the matter mildly. Surely, all our faults and, it is to be hoped, many that do not justly belong to us, are laid bare in this most drastic condemnation of the medical profession. The author professes that his book is written with the sole object of elevating our standard, but a careful reading of it scarcely bears this out.

The first two chapters leave one with a feeling of disgust, and the author has chosen his words wisely when he says that he is referring to the "ghastly mistakes" of the doctors. A more horrible compilation of gruesome incidents can scarcely be imagined than is contained within the covers of this book, and it is a gross libel on the profession to imply that they, in any way, represent the real standard of medical men. Even if the cases recorded are all true, they must still be looked upon only as isolated and most unhappy incidents, but, as a matter of fact, it is perfectly apparent from the manner in which they are stated that the author can have had only hearsay testimony concerning most of them, and they are so different from the ordinary methods of professional procedure as to be absolutely grotesque and outrageous.

It would appear from the announcement of the book that it is the intention to distribute it among laymen, as well as physicians. If such is the case it can only be hoped that the public will exercise a better judgment and a finer discrimination in interpreting the book than has the author in writing it, especially since, in spite of its weak points the book contains many excellent features. Thus the chapters on "Education at the Cost of Human Life," "The Unspeakable Quack," "Vivisection, Straining at the Gnat; Vivisection, Swallowing the Camel," "The Surgical Novice," "The Amateur Anesthetist and Hospital Abuses"

point out clearly and forcibly many conditions in the medical profession which are rightly matters of grave concern; and it is a pity that this part of the book cannot be dissociated from its other and much less desirable portions.

DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN. By Harry Sturgeon Crossen, M. D. Second Edition, Revised and Enlarged. St. Louis: C. V. Mosby Co., 1910.

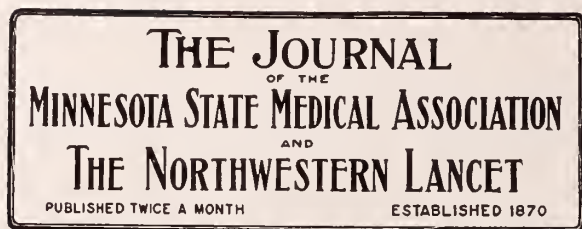
This profusely and appropriately illustrated text-book has many very valuable features. The illustrations are numerous and well selected. Many have been carefully chosen from other works, but some very good ones are designed for this publication. The typographical work is good, the book being printed on good paper in large clear type, and the proof has been carefully corrected. It is written in a clear and interesting style. Although it contributes nothing particularly new to the subject, the consideration of the different subjects is well up to date.

The first portion of the work is devoted to a consideration of the various methods of gynecologic examination. The author goes into very careful detail, and many valuable points are brought out. This is a very interesting and valuable part of this text-book.

In the discussion of the diagnosis, the classification of subjects is largely topographical. In this way the pathological conditions are brought to the reader's mind in nearly the same way as they would be were a case presented to him for diagnosis. This is presented quite thoroughly and in a clear and concise manner.

The usual anatomical classification of diseases of the generative organs is followed in presenting the various pathological conditions. The limitations of a text-book make an extensive consideration of these subjects impossible, but, though brief, it is satisfactory.

Appended to the work are some medicolegal facts that are of interest to the gynecologist. A formulary of drugs and prescriptions of value in the treatment of diseases of women completes the book, and may appeal to many readers.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

FEBRUARY 1, 1911

ARSENOBENZOL (SALVARSAN)—"606"

Ehrlich's Salvarsan ("606") has swept over the country like a whirlwind, and is the all-absorbing topic for conversation among lay and medical men.

It is only recently that any considerable supply has been sent to this country, and every package has been snapped up for experimental purposes.

Arsenobenzol has been heralded by lay magazines until the general public have a bowing acquaintance with Ehrlich's new discovery, and many amusing bits of conversation have been overheard relative to the safe and sure cure for syphilis. The wide publication of a remedy for the venereal peril will produce the same enthusiastic bounds and rebounds that accompany the over and too early advertising of any new remedy.

The administration of the drug by careless persons will doubtless lead to errors, failures and occasional deaths; but the ultimate value of the remedy must be left to skilled men who carefully select their cases. The tendency to use arsenobenzol for any syphilitic case is to be condemned. Ehrlich has proclaimed that definite lesions of the internal organs, syphilitic or other, are recognized contra-indications. The rare cases in which mercurials have failed are good subjects for experimentation with the drug, and

few men would hesitate to use arsenobenzol when a life is at stake.

The method of administration is either subcutaneous or intravenous. The latter may be the safer method when properly used. The hypodermic method is exceedingly painful, and not infrequently the pain lasts from two to twelve hours, and in many instances morphine must be given to relieve the intense suffering. The intravenous method is less painful, but the possible dangers of administration are increased. Whichever way the drug is used, the patient must be put in bed, there to remain quiet and under close observation for about one week. One dose is usually sufficient, but in some case a second dose may be needed.

A positive Wasserman reaction is the safest guide to the use of salvarsan; and a complete examination by competent specialists, including the nervous system, urinalysis, and a blood-count, is most essential. The consensus of opinion is in favor of salvarsan, but a few syphilographers are skeptical about the real merits of the chemical.

The reports vary according to the different view-points of observers, and, to the credit of medical men, it can be said that the drug is on trial and will be seriously and conservatively considered and studied.

One patient who developed a growth behind the liver and who was surgically explored was told that his trouble was malignant as he denied syphilitic infection. He was reported cured after one injection. Another patient, a tabetic, was immediately relieved of his pains, and his ataxia was so improved that his case was dismissed. In neither of these patients has sufficient time elapsed to prove or disprove a cure. Engman, Mook, and Marchildon of St. Louis report, in the *Journal of the American Medical Association*, sixteen cases. In nearly all of the cases when the lesions were active a marked leukocytosis was present, and it increased after the injection, but subsided very rapidly. Skin manifestations disappeared rapidly. Two of the cases of nervous syphilis were made worse by the injections. Occasional sloughing occurred, and occasional nephritis developed, but cleared up. The observers frankly state that they had seen equally as rapid disappearance of skin manifestations from the use of injections of mercury; but several of the cases reported by them seemed to be rebellious to mercury.

Gottheil, in the *New York Medical Journal*, reports twenty-five cases of syphilis treated by

"606." He is not enthusiastic about his results, and believes mercury is quite as satisfactory, but he admits that "606" may be quicker in some cases. The damage to the kidney, which is usually transitory, must be reckoned with. It may be used where other remedies fail or in severe or malignant cases, but he advises caution and care, and is still waiting for the permanency of results.

We may say for the benefit of the inquirer that arsenobenzol comes in closed packages, one dose in each package, and retails for two dollars and fifty cents; and it is administered by a skilled operator for whatever the tariff will stand.

THE FINANCIAL RESOURCES OF MINNESOTA

According to State Auditor Iverson the receipts and disbursements of the State of Minnesota for the fiscal year of 1910 were \$28,133,907.60, which is more than double the sum for the year 1900.

The total taxable valuation for 1900 was \$588,000,000, and for 1910 it was \$1,150,000,000. A part of this enormous revenue comes from railroads, corporations, agricultural-land sales, timber sales, and iron-ore royalties. Fortunately for the State of Minnesota, the United States Supreme Court has sustained the decisions of the lower courts governing the control of taxable properties, and thus the state has been able to reduce the revenue-fund tax-levy to nine-tenths of a mill, which is one of the lowest levies in the history of the State. The great and further good that has come to the people of the State is that the burden for the maintenance of the State government is unusually light.

"The record shows that seventy-seven out of the eighty-five counties received back from the state in the way of school apportionment and state aid to schools from direct appropriations of the legislature, more than they paid into the State treasury as direct taxes for all State purposes. In other words, the cost of maintaining the State government, our great university, normal schools, hospitals, and other state institutions, was no burden whatever to the taxpayers of these seventy-seven counties, and, in fact, they received as aid for the support of public schools nearly \$1,000,000 more than they paid into the State treasury. This is made possible, because in the eight remaining counties they have a very large valuation, and a compara-

tively small school population, while in the seventy-seven counties they have a large school population and a comparatively small taxable valuation. This policy, which has been in force for twenty-odd years, has had much to do with the advancement of our public school system to one of the best in the land."

The early pioneers of the State, fifty years ago, set aside lands for school purposes which now are extremely valuable, and it has been said that within fifty years the State will have nearly two hundred and fifty million dollars to its credit for educational purposes.

Under such favorable financial circumstances it is the duty, and should be the pleasure, of the present legislature to grant abundant relief to our state institutions. This can be done, it is thought, without modifying the existing constitution.

For this reason, as well as for many other equally good reasons, the legislature has been asked for liberal appropriations for the university, its enlargement by new buildings and an increase in the salaries of its teaching force. But few realize how many teachers in the state school live on meager salaries, neither is it generally known that the majority of the faculty members of the Medical Department of the University receive no compensation whatever.

Educational and health-improving measures should go hand in hand, and no sum (that will be appropriated by the legislature) is too large to carry out the problems that have been discussed by the State boards. The Board of Health will ask for \$500,000 to begin a system that will put Minnesota in the front rank of states.

Considering the statements made by the State Auditor, we are rich enough to disburse the sums requested by the Regents of the University and the State Board of Health.

HEALTH CRUSADES

It is rather interesting to note the change of attitude of physicians and laymen toward sanitary improvements and also to see how much the people think of the dangers that menace the race. In England, for instance, there is some alarm over the drug-habit that spreads among all classes of people, of low and high grade. The habit of taking drugs for all sorts of things, minor or major symptoms, has grown amazingly. There are many business and professional men and jaded society women who think they must indulge in an antidote or stim-

ulant simply because they have what they are pleased to call "brain fag"! The man of business takes whiskey or wine to brace him up after a day of work or worry; the doctor takes a bit of morphine to enable him to continue to practice his profession day and night; the nurse indulges in stimulants or cocaine, in order to keep up appearances; the society woman flies to bromo seltzer to ease a pain in her mind or to flush her cheeks for the morning or evening meal. One woman relies on volatile salts, chloral, or brandy, while another takes a mixture of ether and other drugs to stimulate her alleged flagging heart. Camphor and quinine are freely used for stimulant or tonic, but in the end anything that stimulates or makes one forget trouble is as eagerly sought as morphine or alcohol. Men have been known to drink liniment which contains many things besides alcohol. Cologne water, Florida water, Jamaica ginger, or lavender spirits is commonly employed by the better classes.

In the end the result is the same, particularly when stimulating or narcotic drugs are employed.

The drug-habit leads to a sapping of the will-power primarily, and if recovery is expected an agonizingly painful "cure" is inevitable.

The resort to drugs of this kind, stimulating or narcotizing, has grown to such proportions that more drastic laws must be enacted and enforced to prevent "counter-prescribing." The druggist, not infrequently, is unable to deny a good customer a dose of some sort when a hurried demand is made for it. In a measure he puts himself on the same plane as a saloon-keeper, to relieve the habitué from temporary collapse.

As a matter of fact, the people who use drugs habitually for the immediate effect could, if they would, get on much better without them. It is a question of will and purpose, the cultivation of a determination to forego the drug that leads to mental, moral, and circulatory deterioration.

Morphine and cocaine are the scourge of the country, and the blame for the inception of the habit lies with the physician who does not, or will not, foresee the dangers. There are too many willing physicians who administer opium in some form in order to expedite relief or to procure ease from undetermined symptoms. The result is a willing patient who becomes the victim to a habit. Not infrequently, professionals,—actresses, artists, dentists, doctors, lawyers and others,—begin a promising career only to be

wrecked for life on drugs. Few can see or appreciate the dangers until it is too late to re-establish the old, safe, and sane will-power.

The question of danger in the use of bromo seltzer and other effervescent compounds has been sadly overlooked. A slight headache, a mild nausea, or a tired brain is relieved immediately by these acetanilid preparations. The same relief is obtained by a glass of hot water, a little natural saline, a cool or hot bath, and a short period of rest. This simple régime does not appeal to the habitué. He wants the effect regardless of the consequences. To face the possibility of anemia, circulatory impairment, and the after-effects of the drug, is nothing to the lay mind, but if the individual could be made to understand that the continuance of this form of drugging is the cause of many nervous conditions in which the loss or failure of will-power and independence is the fundamental basis of their complaints, it might be possible to release them from their self-imposed imprisonment.

The physician must again improve his psychotherapy by preaching the essentials of personal sanitation and presenting urgently the common-sense theories that are found in everyday practice.

The day of needless drugs and of drugs without reason must soon pass. Common sense, simple sanitary corrections in daily life, and the minimum amount of drugs will be followed by health and comfort. Open air, sunshine, and, what is exceedingly important, an occupation in life that means the betterment of others, are the essentials to promote self-control and mental and physical stability.

CORRESPONDENCE

SYPHILIS AND CANCER

Antwerpen, Belgium, Nov. 7, 1910.

TO THE EDITOR:

I had the good fortune to be present at the syphilis congress at Paris last week. It was held in the museum of the old St. Luis Hospital. Experts from all over the world were there, and the discussions were of course upon the celebrated "606." Gaucher of Paris had treated some 400 cases. He said that in most of the primary forms the lesions disappeared as by magic, but that some peculiar things also happened. He

had, for instance, seen that the primary forms would turn into the tertiary after having been injected. In the "mercury-fast" cases the results were surprisingly good. In the tertiary forms the time was yet too short to come to any conclusion. The consensus of opinion was, however, that a new and brilliant remedy had been discovered for the treatment of lues, but that it would take a long time of trial yet to place the remedy in its right place.

Several unforeseen results may occur. Albuminuria and ptosis are among them. Particular stress is laid upon the occurrence of optic neuritis (*Stauungspapille*), and an oculist should first examine the patient's eyes before the injections are administered, as the remedy is absolutely contra-indicated in diseases of the eye. Patients should be confined to the hospital while under treatment. The remedy is by no means devoid of danger, and indiscriminate use of the preparation in the hands of inexperienced men is strongly to be deprecated.

Here in Antwerpen I had the pleasure of meeting Dr. Bertrand, who is the chief of the bacteriological and pathological service in the hospitals here. The doctor is just placing upon the market a serum for pneumonia. He calls it "Immunicine antipneumococcique," and he has also made preparation for its manufacture in the States where he was last summer for the purpose of having Messrs. Parke, Davis & Co. make it for him. It will yet take a little while before it will be ready for the market. It is an extract of the marrow, blood, spleen, and thymus gland of rabbits strongly vaccinated against the virulent pneumococcus. The dose of the serum is 2 c.c. When the diagnosis is made 2 c.c. of the serum are given. The next morning again 2 c.c. are injected. As a rule the fever will have gone down the next morning. If the temperature, however, shows 100° F. another injection should be given. The average number of injections given is two.

The serum can be used also for complications following the infection from the pneumococcus bacillus. The serum is best given by the intravenous route, for the quickest and the best results are then obtained.

Dr. Bertrand says that the success has been great after the use of the serum, and that in Antwerpen its use has become universal. It must be understood that the serum is a bactericide. It will not remove the pathological processes that have taken place due to the pneumococcic infection, but these conditions rapidly

disappear upon the death of the bacilli. Another advantage in using this serum is that it is given in comparatively small doses, as compared to those of other serums that are on the market. In short, the doctor claims his serum to be an absolute specific for pneumonia, just as the antitoxine serum is for diphtheria.

Another serum is now being worked upon by Dr. Bertrand. It is a vaccine for carcinoma. It is nothing more nor less than a treatment of cancer with cancer-cells. He makes an emulsion of cancer-cells by trituration of cancer-tissue in glycerine. In this emulsion it is necessary that the cancer-cells be intact, i. e., they must not be ruptured. No antiseptics may be used, because these destroy the activity of the emulsion, consequently the microscope must be used to demonstrate that no foreign bacteria have become mixed with the preparation before it is used. The doctor has described one case treated with this emulsion that is so remarkable that I cannot deny myself the pleasure of giving you a short résumé of its history.

A woman, 45 years of age, had her left breast removed for cancer on the 20th of August, 1908. In January, 1909, there appeared in the cicatrix three nodules, varying in size from that of a pear to that of a pea. Fifteen days more passed before anything was done for her, and at that time the tumors had penetrated the skin and showed an exuberant growth.

Injections of the emulsion were now started with small doses, but in place of an amelioration the tumor grew rapidly larger. Six weeks after the commencement of the injections the patient disappeared, but she came back about two months afterwards. She had not been able to come because one of her children had taken sick and had died. She was now in a very deplorable condition, the cancer had extended greatly, and she could not raise her left arm, and also had to quit her work, which was that of a street sweeper.

The injections were again commenced, and the tumor dressed with plain salt water. In about a month the tumor had stopped growing. In July the patient again disappeared, due to the sickness of one of her children. She returned again in August, but had then lost all the benefit of the previous injections, and now there were a half dozen small nodules towards the right of the sternum. The patient at this time was very cachectic and anemic. The injections were again commenced, and the doses given were twice as large as before. There were no local or constitutional reactions observed. In about three

weeks the patient commenced to move her left arm quite freely, the recently discovered nodules were retrograding, and the progress towards betterment was quite appreciable. In the middle of October the retrogression of the tumor was quite rapid, and at each of her half-weekly visits thereafter the physicians were quite struck by the rapid disappearance of the tumor; and on the 5th of November the patient was quite well, and the cancer had entirely disappeared. This case had been exhibited at the medical society of Antwerpen, and shows at present absolutely no evidence of any neoplastic growth.

He has also treated another case of cancer of the mamma in a patient that absolutely refused any surgical intervention. This case has also been cured.

At the close of reciting these cases the doctor asks to what can be attributed the cure of these patients, whether it is due to specific antibodies or to some other process. This question he does not answer, but he is absolutely sure that the cure of these cases can have been caused only by the injection of the cancer-emulsion. It will however, take a long time before we can arrive at certain conclusions, as the treatment is necessarily slow, and different clinicians will have to report upon their successes. I understand also that Prof. Røvsing, at Copenhagen, has used a similar emulsion with equally good results.

J. LYG, M. D.

THE POWER AND DUTY OF THE STATE BOARD OF MEDICAL EXAMINERS

Minneapolis, Jan. 18, 1911.

TO THE EDITOR:

Some time ago my attention was called to the fact that a certain man was practicing medicine without a license in a town not far from Minneapolis. The attention of the Secretary of the State Board of Medical Examiners was called to this fact, but nothing was done about it. I personally spoke to one of the members of the Board about it, and was informed that the Board had no more power to stop illegal practice of medicine than anyone else, and that they have no money to do it with. Then I looked the matter up further, and find that our Board of Medical Examiners is authorized by Section 2295 of the Revised Statutes of Minnesota for 1905. The Board is appointed by the Governor and consists of nine qualified physicians, who serve for a period of three years. It provides for the examination and issuing of license, and Section 2300 provides as follows:

"Every person not heretofore authorized by law so to do who shall practice medicine in this state without obtaining the license herein provided for, and every person who shall so practice contrary to any provisions of this subdivision, shall be guilty of a misdemeanor, the minimum punishment whereof shall be a fine of \$50.00 or imprisonment for ten days."

It says nothing whatever about the Board having the power to prosecute or in any way to bring the offender to justice, so that any quack or any one else who wants to practice and cannot pass the Board's examination, can practice just the same and no one will be likely to say a word.

If by chance he should be brought to justice, he would probably be fined \$50.00 or given a ten-day sentence, after which he could go right on practicing again. His fine would be little more than if he had been arrested for being drunk or for disorderly conduct. In other words, it is only a misdemeanor. On the other hand, if he practice law without a license it is a gross misdemeanor, and is punishable by somewhat like six months' imprisonment.

Now, it seems to me that it is nearly time for the medical profession of the state to wake up. It is time that we get a bill through the legislature that will make the punishment for illegal practice of medicine something to be dreaded and not a joke, and that it be considered a crime, as it really is, and not a slight mistake. Also our Board should have the power to revoke a license, as well as to grant one, and if a case of illegal practice is reported to them, they should investigate and act.

There should be incorporated into the statute a provision somewhat like the following:

"Anyone having knowledge that a person has rendered himself liable to removal or suspension or shall be practicing medicine without a license, shall report the facts constituting such alleged liability and give the names of witnesses thereto to a member of the Board of Examiners. If such member be satisfied that the accusation, if true, constitutes sufficient ground for removal or suspension or punishment, and that the same is probably true, he shall refer it to the Secretary of the Board, and such secretary, or some member of the Board designated by him, shall investigate the facts upon which the charge is based, and if he find reasonable grounds for believing the person guilty of the act charged, or that any grounds for his removal or suspension exist, and that his guilt can be proved, he shall make or cause to be made to the court a verified

accusation thereof, and the County Attorney of the county wherein such person resides shall conduct the prosecution."

This would give the Board of Examiners the power to prosecute all persons who illegally practice medicine or surgery, and do away with the personal element, thus putting it up to the Board, instead of any one individual.

I am writing this simply to call the attention of the legitimate practitioners of this state to the fact that under existing conditions anyone can practice medicine, whether he ever saw a medical school or not; that our State Board of Examiners has practically no power; and that it is our own fault if we do not see that they get the power.

The examining boards of lawyers or barbers have more power than our Board, yet the relative importance of those professions to our own, as far as the public is concerned, cannot be compared.

I hope this matter will be taken up by our societies and agitated until something is done in the way of improvement.

F. A. ERB, M. D.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

The January meeting of the Academy was held at St. Joseph's Hospital in St. Paul, and was a clinical session wholly.

Dr. H. J. O'Brien presented the case of a boy, 14 years of age, who had come to him with a deformed shoulder following injury in a football game. He had been at a loss to account for the condition or to make a diagnosis until an x-ray examination revealed a dislocation of the acromial end of the clavicle. Torn shreds about the articulation were also discernible. He had placed the joint in position and supported the shoulder (with the forearm across the chest) by broad straps of adhesive plaster. After seven weeks the dressings were removed, and the shoulder found to be in excellent condition.

Dr. Alex R. Colvin presented the case of a girl, aged 6, who had been injured by falling between the wheel and the box of a wagon. The child's head had been caught in such a way as to injure the articulation of the lower jaw, and it became ankylosed. He had experienced considerable difficulty in determining which side was at fault but by use of the x-ray he decided that

it was on the right side, although the scar indicated the left. Operation revealed complete ankylosis of the right side. The joint was excised, a portion of the fascia turned in to cover the end of the bone, and an attempt was made to scoop out a new fossa for the head of the bone, but the latter was not very satisfactory. The result of the operation, however, was that immediately afterward the child could open her mouth widely, while before the operation the aperture between the teeth was but half an inch; it is now, two weeks after operation, about one inch.

Dr. Gillette inquired whether he had used forcible extension following the operation. The answer was, "No, because the movement was very great at once." While there has been some retraction of the jaw, yet the teeth articulate very nicely.

Dr. Harry P. Ritchie exhibited x-ray plates and gave the history-story of "A Case of Gastropsis and Visceroptosis." The young woman came under observation seven years ago at the age of 25 years. She had vomiting at the menstrual time; pain, and loss of weight. In 1903 she was operated on for an old chronic appendicitis. In the four years following she was operated on four times, and had a period of rest-cure treatment, but each time she came back to the old difficulty of vomiting, pain, emaciation, etc., as soon as she attempted to be on her feet. These things were evidently due to the fact that the ptosis prevented the stomach from emptying itself. The case was properly diagnosed seven years ago, but until recent demonstration by Goldthwait, the proper treatment of this class of cases has not been recognized.

Dr. Archibald MacLaren in discussing the case reported by Dr. Ritchie said that this trouble is undoubtedly due to congenital deformity, and that the cases belong to internal medicine rather than to surgery. The fact is that the position of the stomach is normal when the patient is on her back, but comes down only when she takes a meal and is on her feet. It is characteristic of the type that when loss of weight occurs there will be all sorts of symptoms referable to the abdominal and pelvic regions. Many cases of displacement of the uterus are on the same basis as these.

Dr. Hunter raised the question as to how frequently displacement of the liver occurs in these cases. He stated that he now has under observation one such case, and he cited five cases that had been reported at Guy's Hospital.

Dr. A. Schwyzer was of the opinion that the tendency is too radically away from the surgical treatment of this class of cases, and cited an instance in which he had operated with great benefit to his patient.

Dr. Schwyzer then presented a case of "Enchondroma of the Femur, with Resection of the Femur and Transplantation of the Fibula." The patient is a young lady, aged 16 years. From the age of three she has had at various times small lumps appearing on the feet and hands, but some of these have been removed by operation. Others, that have not been removed, have grown smaller. One on the finger, which was the size of a cherry, is now the size of a flaxseed.

One year ago she began having pain in the right thigh, mostly at night. The pain was relieved on walking. Swelling of the femur occurred, so that it became seven centimeters larger than the left. The x-ray showed a change in the shape of the bone. It was decided that the growth was malignant, and operation was advised. On account of the youth of the patient it was decided to save the leg, if possible, so microscopic examination was made at the operation, and it was found that the growth was an enchondroma; and therefore it was decided to remove the diseased portion of the shaft of the femur, and replace it with a piece of the fibula from the same leg. This piece of fibula was cut one and one half inches longer than the piece of the femur removed, the small end thrust into the canal of the upper fragment of the femur, and the lower end into the wound below. The wound has healed nicely, and now, seven weeks after the operation, the thigh has considerable strength and firmness and seems in a fair way to become a useful member.

Dr. A. J. Gillette presented a man, aged 32 years, who had received an injury to the knee in February last, but there had been very little trouble with it until in May following. In August there was tremendous enlargement of the knee. It was lax and loose, however, and after careful observation he had concluded that it must be a Charcot joint. Upon investigation then he had found the typical symptoms of tabes, which had not been reported, thus confirming his diagnosis.

ARTHUR W. DUNNING, M. D., Secretary.

PARK REGION DISTRICT AND COUNTY SOCIETY

The Society met at Fergus Falls Jan. 11, 1911, with sixteen members present.

The following papers were read: "Some Com-

monplace Reflections," by Dr. O. M. Haugan, Fergus Falls; "Chronic Joint Diseases of the Adult, Non-tubercular," by Dr. Emil S. Geist, Minneapolis.

Officers were elected as follows: President, Dr. O. M. Haugan, Fergus Falls; first vice-president, Dr. A. J. Gilkinson, Osakis; second vice-president, Dr. L. W. Armstrong, Breckenridge; secretary-treasurer, Dr. L. A. Davis, Dalton; censor, Dr. T. N. McLean, Fergus Falls; delegate, Dr. L. A. Davis, Dalton; alternate, Dr. C. W. Meckstroth, Brandon.

Five new members were elected.

L. A. DAVIS, M. D., Secretary.

WINONA COUNTY SOCIETY

The regular meeting of the Winona County Society was held in Winona Jan. 3, 1911. The following officers were elected:

President, Dr. E. M. McLaughlin; vice-president, Dr. W. H. Neumann; secretary, Dr. H. F. McGaughey; censor (3 years), Dr. G. L. Gates; delegate, Dr. G. J. Tweedy; alternate, Dr. J. W. Scott.

H. F. MCGAUGHEY, M. D., Secretary.

MOWER COUNTY SOCIETY

The Society held its regular quarterly meeting in Austin on Jan. 11, 1911. A paper on "Epidemic Jaundice," by Dr. A. N. Collins and clinics on "Diseases of Children" and the "Eye," by Drs. Leck and Rogers, brought out much interesting discussion. A banquet at the Fox Hotel followed the scientific session at which the members, their wives, and invited guests were entertained by the Society.

CLIFFORD C. LECK, M. D., Secretary.

THE SOUTHWESTERN SOCIETY

The Society held its twenty-third annual meeting at Worthington on January 12, with twenty members and a number of visiting physicians present.

The matter of the change of name of THE JOURNAL-LANCET, as presented to the members through the above publication, was discussed, and the Society desires to go on record as being fully satisfied with present conditions. Our Delegate to the coming State Association meeting is instructed to use his influence to continue the present contract with the publisher.

The annual report of the Secretary-Treasurer was read and accepted.

Officers for this year were elected as follows: President, Dr. A. B. Williams; vice-president,

Dr. G. D. Rice; secretary-treasurer, Dr. Emil King; delegate, Dr. Chas. P. Dolan; alternate, Dr. Ray, Humiston; censor, Dr. F. M. Manson.

Reports that members are making fraternal life-insurance examinations for one dollar, contrary to our free-bill and resolutions, will be investigated, and if found true will be dealt with at the next meeting.

The following papers were read and fully discussed: "Hypertrophy of the Prostate," by A. E. Spalding, Luverne; "Appendicitis and Pregnancy," by Dr. F. M. Manson, Worthington; "Sources and Modes of Infection," by Dr. H. W. Hill, Minneapolis; "Acute Poliomyelitis," by Drs. Emil King, Fulda, and L. Sogge, Windom; "Infant-Feeding," by Dr. Eugene G. McKeown, Edgerton.

EMIL KING, M. D., Secretary.

NEWS ITEMS

Dr. J. C. Adams has moved from Lake City to St. Paul.

Dr. T. J. Jenson, of Madelia, has moved to West Duluth.

Dr. Henry McGuigan has moved from Mazepa to Red Wing.

Dr. A. R. Wylie has moved from Faribault to Grafton, N. D.

Dr. A. C. Dogge has moved from Missoula, Montana, to Polson, Montana.

Dr. J. H. Andrews, of Mankato, is visiting the hospitals and clinics of New York and Boston.

Hutchinson wants a hospital, and its Commercial Club and physicians are laying plans to establish one.

Dr. M. J. Burns, of Milan, has completed his new hospital building, and it is now ready for occupancy.

Dr. John U. Riggs, of Bryan, Ohio, a brother of Dr. C. Eugene Riggs, of St. Paul, died at St. Paul last month.

Dr. J. S. Kilbride, of Canby, has turned his practice over to Dr. Merton Field, and will soon leave for Europe.

Twenty-one Minneapolis physicians gave one hundred dollars each in one day for the new art museum the city is to found.

Aberdeen, S. D., will get the German Baptist Hospital which several cities have been after. The building will cost \$50,000.

Dr. G. L. Gossle, formerly of Wabasso, who has been doing post-graduate in Vienna, has returned and located at Minneota Lake.

Dr. E. H. Current, now of Mowbridge, S. D., has been admitted to practice in the State of Washington, and will soon locate at Spokane.

The osteopaths of North Dakota will put up a great fight to prevent the passage of a more stringent medical-practice act by the present legislature.

Dr. W. H. Rowe, Jr., manager of the St. James Hospital, of St. James, was married last month to Miss Frances Marie McIntosh, of Minneapolis.

Dr. Paul Ashley, formerly of Virginia (Minn.) but now located at Wibaux, Montana, was married last month to Miss Mabelle Reid, of Cleveland, Ohio.

Dr. George A. Binder, of St. Paul, died on January 15th, after a long illness from typhoid, at the age of 46. Dr. Binder graduated from the State University with the class of '92.

Dr. M. W. Thrane, of Madison, has decided to retire from practice, and will soon move to Oregon. Dr. Thrane has been associated with Dr. Giere, of Madison, for eleven years.

At a meeting of the Episcopal clergymen at Winona last month the subject of the relation of the clergyman to the sick was discussed. Dr. Kilbourne presenting the views of physicians.

The City and County Hospital Association of Albert Lea has selected a site for their new hospital building, and has appointed Messrs. Alban and Fisher, of St. Paul, architects of the building.

A new hospital has been opened at Devils Lake, N. D., by Dr. Maud R. Williams and Miss Eleanor Smith, the latter a trained nurse of large experience. Special attention will be given to maternity cases.

The Stark County (N. D.) Medical Society met at Dickinson, N. D., last month, and elected the following officers for 1911: President, Dr. H. A. Davis; vice-president, Dr. R. H. Beach; secretary-treasurer, Dr. J. P. Weyrens.

Dr. John C. Harding, the oculist, of St. Paul, has returned from an extended trip to Europe and Asia. He spent some time in the hospitals

of London, and then went to India, and worked in the hospital at Amritsur in the Punjab.

The Universities of Minnesota and Wisconsin have each planned to conduct experiments in raising medicinal plants. Probably four or five hundred different plants will be blooming around the Campus of one university next summer.

Mankato has medical inspection in its schools, and also has protests against medical inspection. The petitioners say they do not object to the teachers watching the children and reporting evidences of sickness, but *skilled* watching—never!

Dr. T. E. Flinn, a recent graduate of Rush, after spending a year or more in the Cook County and other Chicago Hospitals, has assumed his father's work in Redwood Falls, and become associated with Dr. Pease under the firm name of Drs. Pease & Flinn.

The Asbury Hospital of Minneapolis held its annual election for its staff last month. Dr. F. R. Woodard remains chief-of-staff, and Dr. W. B. Pineo was re-elected secretary, as has been the custom in his case for many years.

And the latest: The optometrists of Minnesota, in convention assembled, at St. Paul last month, asked themselves why they should not be called doctors. The medical profession may well afford to surrender the title "Doc" to every optometrist who applies for it.

The State Antituberculosis Commission, recently created, is composed of Dr. Geo. Douglas Head, Minneapolis; Dr. E. T. Tuohy, Duluth, and Prof. E. V. Robinson, of the State University. As noted below, Dr. Marcley is the executive agent of the Commission.

A twelve-story building to cost \$250,000 and to be occupied exclusively by physicians and dentists is the dream of the Minneapolis physicians and dentists. Such a structure is now being considered by Minneapolis capitalists, and, if built, will be located on Hennepin Ave.

Dr. George G. Eitel, of Minneapolis, has decided to go on with the building of his surgical hospital for which he had plans drawn two years ago, the foundation being put in at that time. The plans have been much improved, and the contract for the building above the foundation has been let, and calls for an expenditure of \$150,000.

The Northwestern District Medical Society of North Dakota met at Minot, N. D., last month, and elected officers for 1911 as follows: President,

Dr. A. D. McCannel, Minot; vice-president, Dr. J. S. Davies, Granville; secretary-treasurer, Dr. J. R. Ringo, Minot; delegates, Drs. A. D. McCannel and W. E. Blatherwick, the latter of Drake.

Dr. B. O. Reynolds, the oldest physician in active practice in Wisconsin, died last month at his home in Lake Geneva at the age of 87 years. Dr. Reynolds was a member of the Wisconsin State Board of Health for nine years, served in both houses of the State legislature, was a surgeon in the Civil War, and held other positions of trust.

The State Association for the Prevention of Tuberculosis met in Minneapolis last month, and discussed at length the work for the year, and especially the financial needs of the Association. There will be very close co-operation between this Association and the State Commission, and to this end Drs. Marcley and Head, of the Commission, were elected members of the board of directors of the Association. The officers of the Association were re-elected.

Dr. W. J. Marcley, who organized and has done splendid work with the State Sanatorium, near Walker, has been appointed by the State Board of Control executive officer of the State Antituberculosis Commission, a position of great opportunity and equally great responsibility. We predict a great success for Dr. Marcley in his new work. Dr. L. B. Ohlinger has been appointed by the same Board superintendent of the Sanatorium, where he will find a large field of usefulness.

SCANDINAVIAN PHYSICIAN WANTED

A good, well-recommended Scandinavian physician and surgeon, who can conduct a drug-store, is wanted to locate at Audubon, Minn., at once. Splendid opportunity. For further particulars address, G. C. Skeim, Secretary Improvement League, Audubon, Minn.

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A good down-town Minneapolis office for dentist or physician at 412 Reid Corners (9th and Nicollet). Everything is new and up to date. Inquire at above place.

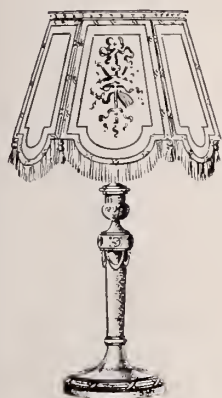
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Messrs. Noyes Bros. & Cutler, of St. Paul, announce that they are receiving from headquarters regular supplies of the new syphilitic specific known as "606," and

IN THE GARDEN

The man who cannot enjoy "the fiction" of the seed catalogues is to be pitied, but not so much as the one who does not know Nature's truth, which is stranger than fiction, and to which he is introduced annually about this time of year through these beautiful catalogues, "to be had for the asking," even on a postal card. But there are catalogues and "Garden Books," and the most beautiful, as well as the most reliable of them all, is Dreer's. Dreer has been "everlastingly at it" for so long—excuse that repetition, for you see, it is repetition of good deeds that makes character, and Dreer's seeds have character. They are true to type, and the type is the highest.

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WHOOPIING-COUGH

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The method of administration recommended is Sy-

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"Three or four years ago, in the gradual development of our scientific staff, we secured the services of Professor Wilbur L. Scoville, a pharmacist well known to the country and a man pre-eminent in the field of what has been termed pharmaceutical elegance. Professor Scoville may well be considered an artist in questions concerning odor, flavor and appearance of galenicals. The first task assigned to Professor Scoville was to go systematically and patiently through our entire line of elixirs—regardless of what other workers had done before him, and regardless of what changes were under consideration at the time. He was given carte blanche to go ahead and suggest any modifications and improvements which seemed to him necessary.

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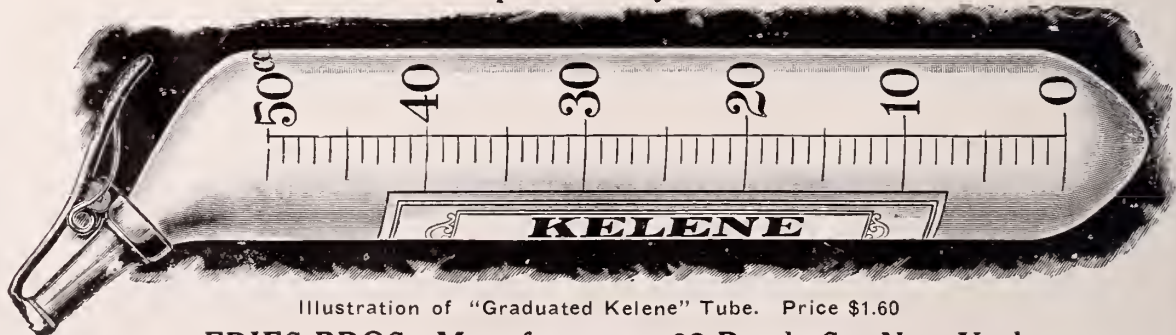


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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, FEBRUARY 15, 1911

No. 4

THE ORTHOPEDIC TREATMENT OF INFANTILE PARALYSIS*

By ARTHUR J. GILLETTE, M. D.

Professor of Orthopedic Surgery, University of Minnesota; Surgeon-in-Chief, Minnesota State Hospital for Indigent, Crippled and Deformed Children

ST. PAUL

As much, and in some particulars a great deal more, is known regarding infantile paralysis, than is known of whooping-cough, scarlet fever, measles, chicken-pox, rheumatism, and many other diseases which might be mentioned. But the general profession has looked upon this disease in such a grave manner that they have thrown the people into hysterical confusion, so much so that it has reached upon our soberer judgment, and many physicians practically abandon a patient as soon as they have positively decided it is a case of infantile paralysis. Then the bewildered parents rush to the first individual who will promise them the most.

We all know cases which, even after the acute stage, recover considerable use of their muscles unaided, and in some cases make almost a complete recovery. This being the case, is it any wonder that all kinds of charlatans are reaping a rich financial reward from these patients? Yet if the same cases had been treated along well-founded and scientific lines they would have been much more improved, with far better results at less cost and without the loss of the most valuable time for beneficial results.

I do not now recall any malady to which the profession has given so much study and research, with returns so great and beneficial, as it has given to the symptomatology, pathology, and treatment of infantile paralysis. Simply because we have not been able to identify the real bacterial agent or its mode of invasion, we ourselves are constantly announcing to the world, through the medical and lay papers, that we know nothing

of this disease, that it is something new, and that we know of no treatment for it. Nothing could be farther from the truth. Let us look at the facts: It is not a new disease; and there are few diseases for which so much has been done, can be done, and should be done, as for infantile paralysis.

I do not agree with some, that we are dealing with a disease in which we are handicapped by our inability to recognize its presence until the danger is irreparably done. The conception of the symptoms of infantile paralysis as given in the older text-books must be markedly modified, which modification is furnished by many recent writers, and the symptoms, while varying, are quite positive and apparent to men of any experience. If the disease is not positively diagnosed, there are general conditions always present which demand our immediate attention, namely, fever and debility. The treatment of these two symptoms is supportive and eliminative, and would be indicated in any infectious disease, and is the proper and only treatment for the early stage of infantile paralysis.

Since 1886 I have studied a great many cases, especially clinically, for we really had many more sporadic cases in New York at that time, and have had since through the West, than the general practitioner seems aware of, for these cases were not usually recognized in the early stages, and naturally drifted into orthopedic clinics, and the orthopedic surgeon saw the most of these cases.

It has been my experience that cases which were treated in acute and sub-acute stages by frequent flushing of the bowels, and reducing the temperature, if necessary, by repeated baths,

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.



A simple leather support with steel stays, which can be worn inside of the shoe. It seems to prevent a deformity in paralysis, and ought to be worn after the deformed foot has been straightened.



A jacket that can be adjusted, and if the deformity extends to the neck muscles the jury-mast can be worn also. This can be removed, and the child receive massage, etc.



About fifteen years ago this little girl walked into my office in this position. By the use of casts I succeeded in straightening the feet and knees, then adjusted leg-braces to prevent the return of the deformity, and a corset to support the spine. She walked for years with the aid of crutches, later walked with a cane, and can now walk, still using, of course, her braces, without canes, and is teaching school.



The first of these three children represents a slight curve after infantile paralysis. In the second one the deformity has progressed a little further, and rotation in the vertebrae is beginning. The third case shows an extreme deformity which could have been prevented by a slight spinal support adjusted early.



This case consulted me about eight months ago. He had wrist-drop, and apparently complete paralysis of his hand. He has been wearing this simple support and demonstrating how much he can flex the fingers after wearing this support four months, showing that the condition was not due wholly to paralysis, but partly to muscular strain.



A little girl whose feet were perfectly straightened after paralysis, but as the physician failed to apply mechanical support to hold them in the correct position, the deformity has again returned.



This child can walk very well without any support whatever, but with the legs in this position and constantly walking, there will soon be a deformity of the knees, which will prevent walking.

administering an anodyne, when required, for pain, keeping the affected limbs quiet and warm, making local applications of ice-bags or counter-irritants to the spine or head, as the symptoms suggest, are far less likely to have as marked permanent paralysis or as many contractions as seen in patients treated in other ways; and the patient is far better in a general way and responds more readily to mechanical and surgical treatment if the acute stage receives the above general treatment. But, at best, over 80 per cent are more or less crippled. Rarely, however, if properly treated, do they become helpless cripples. I can state positively that I have never seen one case so severe but that orthopedic treatment would help it, and in many instances when helpless, would so relieve as practically to cure it.

To prevent the deformity is most important, for it not only checks extreme continuous muscular wasting of the paralyzed muscles, but it



This little boy was brought to the State Hospital with his legs and feet in this position. His back muscles are also paralyzed, and he can sit up only by resting his hands on the floor.



This picture shows him after about two weeks' treatment of repeated plaster dressing. His feet are straightened, and the casts being applied to hold the spinal column and legs straight, he walks with the aid of crutches and a little balancing. For years this boy will have to wear leg-braces and a removable jacket.

prevents muscular strain of the non-paralyzed muscles, and muscular strain amounts, practically, to a paralysis, so far as usefulness is concerned. Let me more practically illustrate what I mean. Many times when there appears to be a complete paralysis of all of the anterior leg-muscles and the non-paralyzed gastrocnemii, if the foot is held in the position of marked talipes equinus as soon as the deformity is overcome by lengthening the tendo-Achilles, and the foot is brought to a right angle and held there a few weeks, it is quite surprising how voluntary motion of the toes will develop and the tibialis anticus begin to functionate after years of apparent paralysis, showing that its inability to perform duty heretofore was simply an apparent paralysis due to muscular strain. The most emphatic proof of this is seen in paralysis of the shoulder, arm, and fore-arm. Oftentimes by carrying such an arm in a sling, the fingers which had been motionless so far as the will of the patient was concerned, will soon show some movement by voluntary effort. By soon I mean this will be done in a few minutes. By keeping the arm in a sling for weeks and months the patient will obtain quite a useful wrist- and

hand-motion in that position. In short, "an over-stretched muscle while the strain is continued loses its function." Therefore, rather than permit these deformities to occur, let us prevent them, and protect the muscles in an early stage from muscular strain by proper mechanical supports in the first days of the disease. This, much more than heretofore, must be our care.

Every deformity illustrated by the cuts in this article could have been prevented by early, well-directed orthopedic treatment. I do not mean by various steels, leathers, buckles, stop-joints, latches, keys, etc., but that, during the acute and painful stage, gradually the flexed limb should be teased straight by bandages, by wooden, felt, or leather splints, or by plaster of Paris. I might perhaps with profit suggest that in using plaster of Paris, or any other hard material in any stage of the deformity, that the parts be well padded, and the circulation be watched very carefully for fear of pressure-sores or trophic ulcers. If the patient has so far recovered from the deformities and paralysis as to begin to use the limbs, they should not be used too much, so as to produce the muscular fatigue or strain heretofore referred to.



A case of apparent complete paralysis of the anterior leg-muscles.



After the tendo-Achilles was lengthened, and a support was worn, he began to have use of the anterior leg-muscles, especially the tibialis anticus, which shows that part of this paralysis was due to muscular strain. His ankle has good motion, and he walks on his foot without any support.

After six or eight weeks following the acute symptoms, braces should be applied to prevent deformity, which is sure to occur, during the next two or three years, at least, if the patient by his own effort is not able to voluntarily hold the extremities straight and control them.

If the muscles of the back are paralyzed a support should be adjusted to hold the spinal column straight, for, sooner or later, structural changes will take place in muscles, tendons, cartilages, and bones, resulting in a hideous, progressive, and incurable deformity of the spine and probably of the entire trunk. In short, a paralytic deformity is always progressive in the young and growing.

In the application of braces I wish the general profession would look upon this therapeutic measure in a more practical and simple light, for

the general practitioner is the one to prescribe the kind of brace to be worn. By *kind* I do not mean the material; I mean what is required of it. A study of the paralyzed muscles and the position of the trunk and extremities will indicate to such practitioner the requirements of the support necessary. If he does not know the brace necessary, and its strength and mechanism, familiar as he is with the action of the muscles, certainly no instrument-maker can help him out. Through him the orthopedic instrument-maker does a great deal of harm, unless he personally supervise the manufacturing of the brace and then see that it is giving the support and assistance required of it.

Every medical man in the State of Minnesota today knows more about the application of braces and their indication and requirements than any



A case in which paralysis is confined to the quadriceps extensor muscles.



The leg is straightened, and a retention-brace put on. The brace must be worn for several years, or the deformity will return.

maker of orthopedic instruments ever can or will know. All they require is to give the matter a little study, and then call to their assistance a blacksmith, a locksmith, a harness-maker, or a carpenter. All that is required of him is to work under the physician's direction. The physician would be far more justified in sending a patient to a druggist without prescribing for him than he is in sending him to an orthopedic instrument-maker with orders for a brace, for the druggist would do a great deal less harm than a worker in iron prescribing for a diseased or deformed limb; and this is what they are actually doing today in hundreds of cases.

But there is another side to these cases of deformity resulting from infantile paralysis. The treatment is long and tedious, the patient or parents become tired and discouraged, and, no matter how enthusiastic the physician may be, and how much he has tried to educate them that the treatment, in many cases, covers a period of

years, they will drift into different and more alluring channels, which will finally result in the extreme deformities illustrated in this article.

And that brings us to the radical surgical treatment of these cases, but before dealing with this I must refer to a treatment which is much in vogue, and upon which I am inclined to think there is altogether too much stress laid. I refer to massage and electricity. Certainly, massage, that is, rubbing of the limbs, is beneficial, but I question very much whether the so-called scientific massage is any more beneficial than a real good oil rub administered by the mother or any older member of the family, and then keeping up the warmth of the limb induced by the manipulation by extra-warm clothing, night and day.

As to electricity, which is universally applied, I am speaking now only from clinical observation. I agree with Dr. Sachs of New York that, "except as a matter of exercise, electricity is practically useless."



A case of posterior and beginning lateral curvature of the spine, due to infantile paralysis.



This shows the same child suspended in which a plaster cast could be adjusted and a leather corset made from it, to be worn when the child is up and about.

In 1886, when I was house-surgeon of the New York Orthopedic Dispensary and Hospital, it was the routine in all cases of infantile paralysis to turn them over to the neurological department where the principal treatment was electricity.

After months of treatment there they would usually return to the orthopedic department with no change whatever in their conditions that I could see, except a more marked deformity; and it has been practically my experience ever since that electricity does not seem to be of any benefit, except in those sub-acute cases where there is always some improvement as regards motion, whether treated or not. I am sure electricity and massage do harm in acute stages where there is a peripheral neuritis. Rest and warm applications in this stage give the most relief.

As to the treatment of these neglected cases with extreme organic deformities: I must say the results are many times spectacular indeed. Pa-

tients are frequently brought to the office crawling about on their hands and knees, and a careful examination, finding the paralyzed and unparalyzed muscles, and then overcoming the contracted tendons by gradual reduction with plaster-of-Paris casts or by tenotomizing or elongating the contracted tissues, and then adjusting braces with catch-joints, springs, or what-not to act for the paralyzed muscles, we have been able in many instances to transform a helpless cripple into a useful, self-supporting individual.

As to tendon-transference: If we are not well up on the literature of the subject and have not had some personal experience, we might be led to believe more in its efficacy than is actually warranted, for, in my experience, it is only applicable to a few selected cases. I must acknowledge that there are men of more experience who are more enthusiastic about it than I am, but, even in their best results that I have seen, they advise the continuous use of the mechanical



A case of paralytic club-foot.



The feet are straightened, but the deformity will return unless some simple ankle and foot support is worn for a number of years.

supports for a long time after the operation, for fear of over-strain, either by the action of the opponent groups or by erroneously applied body-weight.

In arthrodesis the cases must be even more carefully selected before we decide that a bony ankylosis of the joint is indicated, and I think, for various reasons, it should never be performed in young and growing children, though I must acknowledge that it is advocated by some leading orthopedic surgeons.

We are not yet in a position to apportion the place of nerve-anastomosis in the treatment of infantile paralysis.

This boy you see walking without any supports, came to my office in a go-cart and was carried to the examining-room in his father's arms. The history is that one year previous, (two years ago now) he had an attack of infantile paralysis. The knees were flexed to a right

angle, and the feet were in the position of marked talipes equinus. Without any operation, but simply by repeated plaster dressings, gradually straightening the knees and feet from time to time, I finally completely cured his deformity, as you see. He wore these braces continually for about a year. Of late he has been allowed to take them off and walk a little without any support whatever, as you see him walking now, but I shall insist upon his wearing these braces most of the time for years in order to prevent the muscular strain of over-work, to which I have endeavored to call particular attention.

I may say I have yet to find a case of infantile paralysis, no matter of what age or to what extent the deformity exists, which could not be materially improved, either by mechanical or surgical treatment.

DISCUSSION

Dr. C. Eugene Riggs (St. Paul): You can always trust Dr. Gillette to say the right thing at the right time. Nothing could be more timely for discussion than the subject of infantile paralysis. The Census Bureau of Statistics tells us that in the United States in 1909 there were 569 deaths from this disease.

Infantile spinal paralysis is not a disease of the anterior horns of the spinal cord *per se*; it is an affection of the entire central nervous system, the point of departure being probably its membranes. The cord is affected more than the brain, and the anterior more than the posterior horns. All of Dr. Flexner's attempts to discover, microscopically, the infectious agent have been fruitless. The virus is filterable, just as is that of rabies, and he thinks that it is too minute to intercept those rays of light that are visible to the human eye. It gains access to the nervous system by way of the nasopharyngeal mucous membrane. It is contagious, and each case should be quarantined three weeks. Much can be accomplished by treatment after the acute condition has subsided, and to be efficacious this must be persistent and long continued.

Marinesco has told us that the nutrition of the multipolar ganglion-cell depends upon the stimulation that comes to it from without; hence, from a physiologic standpoint, the importance of mechanical stimuli, such as electricity and massage. It is highly probable that these prevent the retrograde changes in the nerve-cells that would otherwise occur.

Dr. Emil S. Geist (Minneapolis): I was very glad to hear Dr. Gillette's paper on this subject, for it is to the orthopedic clinic that, in the end, the majority of these cases go. I was especially glad to hear the doctor say that every deformity is preventable, or nearly every one. It is sad to see the cases that have gone practically without any treatment designed to prevent deformity.

In regard to the treatment of the acute stage, I do not think the doctor meant to convey any false impression as to our inability to find the germ, for we hope ultimately to find the germ for the antitoxin that perhaps may be developed from it. A new feature in the treatment of the acute stage is absolute rest to the spine. It is the practice of Lange of Munich to give the spine complete rest by means of a plaster cast, and he thinks this benefits these cases.

Besides the brace-treatment there should also be mentioned the operative treatment in the chronic cases. A great many favorable results have been reported in cases in which operations, such as tendon-transplantation, tenodesis, arthrodesis, and tendon-shortening, were performed.

One should be careful to allow ample time (one to two years) to elapse after the acute stage is over before thinking of these operations, for Nature often works wonders in rehabilitating the paralyzed muscles. The operations should be designed to free our patients of braces, if possible. While a brace is a good thing, the orthopedic man tries to get his patient about without one rather than with one.

Another point which I think was not touched upon, is, that we are very likely dealing with something in the nature of a contagious disease. Reports have been made in sufficient number to make this appear plausible.

I would like to suggest that in the isolation of these cases there is nothing that will interfere with the treatment; and the spread of an epidemic may possibly be further limited by taking care of the nasal secretions of the patient. It has been shown by Flexner and Lewis that infection is exceedingly easily transmitted from the nasal mucous membrane of the patient to the nasal mucous membrane of the healthy individual, at least in monkeys.

HOW SHALL WE TREAT APPENDICITIS AFTER THE FIRST FORTY-EIGHT HOURS?*

By J. E. MOORE, M. D.

Professor of Surgery, University of Minnesota

MINNEAPOLIS

Physicians and surgeons are now quite unanimous in the opinion that operation is the safest and, therefore, the best treatment for appendicitis during the first forty-eight hours, providing, always, that proper facilities and a competent operator are obtainable. Without these requisites the mortality-rate will be less without operation. There is still a great diversity of opinion as to the best method of treatment after the first two days. Five years ago I read a paper before this

Association on "When Not to Operate for Appendicitis," predicting at that time that, should I be privileged to appear before you at a later date, I should doubtless modify the opinions then expressed, for I hoped to learn from the experience of myself and others. It is never safe to conclude that we have reached the acme of human perfection in anything, for that precludes the possibility of improvement.

After two days the rule is that the infection has extended beyond the confines of the appendix, so that the surgeon can rarely hope to remove it all. The best he can hope to do then

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

is to assist Nature in her efforts to bring about a cure. The question we are all striving to answer correctly is, How can we best assist Nature? The measure of our success is not the amount of surgery we do, but the number of lives we save. Many lives have been sacrificed in efforts to do too much, or too brilliant, surgery in these cases. It is better to have a live patient with numerous drainage-tubes and a profuse discharge of pus than to have a dead one with a thoroughly washed-out belly and a beautifully closed wound. The riper I grow in experience the greater is my respect for Nature's efforts. She performs wonders when we give her a chance. It is a wise surgeon who knows how to assist Nature without trying to usurp her functions.

The operation-pendulum is still swinging. There was a time when many surgeons felt it their duty to operate upon all patients suffering from appendicitis, no matter what the stage of the disease or condition of the patient when he came under observation. Then came a reaction, and the "let-alone" treatment was much in evidence. At the present time the tendency is toward operation. I operate more frequently than I did five years ago, because I lost some patients through conscientious waiting. I still believe, however, that there are times when not to operate. In advanced cases the method of operation is of infinitely greater importance than the time. My earlier experience in operating at a late date was so unsatisfactory that I became discouraged and was disposed to delay. The trouble was that I did too much; instead of assisting Nature I interfered with her. At the present time I do much less, and accomplish much more.

It is unfortunate that we have so many classifications of appendicitis. It is very unsafe to examine a patient and then conclude that we have a certain variety of appendicitis and base our treatment upon this classification. The time to classify is after we have removed the specimen.

It should be remembered that the statistics of a hospital where all operations are performed by experienced operators are not a safe criterion for the occasional operator, for experience has a very decided bearing upon the results. In the hands of experienced operators the mortality increases with every day of delay. Statistics that seem to disprove this statement are made by forgetting the ones that died while waiting, and operating upon the ones that had the hardihood to carry them over to the so-called safe period.

When the surgeon is called to see a case of appendicitis on the third, fourth, or fifth day, and finds the patient doing well, that is, with a temperature of not over 102° and pulse below 100, what is his duty? This is the class of cases in which waiting is advised by many so that Nature may build up a better protecting wall between the infected and the uninfected portions of the peritoneum. I believe that it is proper and right for an experienced operator to operate at once, but that the occasional operator should wait until Nature has done her best. At this time the appendix should be removed. The operator should be content to remove the appendix and establish drainage, for an effort to do more subjects the patient to greater danger than he would have been in without an operation.

When the surgeon is called on the third, fourth, or fifth day, and the patient is doing badly, with a temperature of over 102° and a pulse above 100, it is clearly his duty to operate, because these are Nature's signals of distress, indicating that she needs help. When the surgeon is careful to assist Nature he will save many of these cases, which, next to those beginning with a ruptured or gangrenous appendix, are the most dangerous we have to contend with; but when he forgets that he is assisting Nature and undertakes to do too much he will meet with many disasters. In these cases the removal of the appendix and the establishment of drainage meet the indications. Anything more than this is meddlesome surgery; and meddlesome surgery is always bad surgery.

The following case operated upon last month is an illustration of this class of cases. A male patient of Dr. Thomas, of Minneapolis, with Dr. White and myself in consultation on the fourth day; aged 25; temperature between 102° and 103° ; pulse, 120; abdomen, distended. The abdomen was opened in the right iliac region, and a gangrenous appendix removed. A second opening was made in the median line. The pelvis and both loins were drained with large rubber tubes. The patient's improvement was prompt, and he was taken home in two weeks in good condition, the tubes having been removed and the wound still discharging some pus. The appendix was sloughed off flush with the cecum, but, owing to the soggy condition of the bowel and the bad condition of the patient, no effort was made to sew up the opening in the cecum. At two different times a small amount of fecal matter escaped from the wound, but when I last saw him the opening in the bowel had seemingly closed.

I am confident that either delay or a protracted effort to close the opening in the bowel would have resulted in the death of this patient.

When the surgeon is called at a late date, when the whole abdomen is swollen and boggy, and a so-called general peritonitis exists, what is his duty? These patients do not all die if they are not operated upon, but a helpful operation is surely indicated. I believe that an attempt to do radical surgery at this time is dangerous, and it has been demonstrated that it is not necessary. By radical surgery I mean the extensive breaking down of adhesions followed by irrigation of the peritoneal cavity. Two or more openings should be made and large drainage tubes introduced, extending into both flanks and to the bottom of the pelvis. The appendix should be removed if it is convenient, but an extensive search for it is more dangerous than advantageous. The following two cases, both operated upon in the month of May of this year, will illustrate what can be accomplished by this mode of treatment.

Case 1.—A patient of Dr. Dickinson, of Watertown, South Dakota, was brought to me at the Northwestern Hospital after he had been suffering from appendicitis for two weeks. He was a boy, aged 14 years, but with the physical development of a boy of ten years. His temperature varied between 102° and 103°, with a very high pulse. He was greatly emaciated, and his whole abdomen was swollen, boggy, and evidently full of pus. An opening was first made at the usual site on the right side. The appendix was not in evidence, and was not hunted for. A second opening was made at the corresponding point on the left side, and two three-quarter-inch soft-rubber drainage-tubes were introduced into both flanks and to the bottom of the pelvis. A free discharge of pus was at once established, the greater quantity coming from the left side. After the first day the boy began to improve in every way, and in three weeks he was well enough to go home.

Case 2.—A patient of Dr. Knights, of Minneapolis; a woman about 30 years old and the mother of three children. Dr. Knights was not called until about the fourth day of her illness, and he called me in consultation shortly afterwards. I found her with a well-marked appendicitis, but with a moderate temperature and pulse. I advised waiting for a time because an abscess was evidently forming, and in order to reach it at that time it would have been necessary to go through the healthy peritoneal cavity.

Dr. Knights was called out of the city so that there was a longer wait than we intended. In the night of the ninth day, when turning over in bed, the patient was taken with severe pain followed by collapse. Dr. Knights, who had just returned, was called, and he telephoned for me. The patient was in profound collapse, with high pulse and subnormal temperature, evidently due to rupture of the abscess into the general peritoneal cavity. She was given a salt-water injection and strychnia, and later in the day carefully moved to the Northwestern Hospital. The same treatment was kept up through the night because the patient was so low that operative interference seemed unwarrantable. The next morning the pulse was 160, her temperature subnormal, and she was so toxic that she could not answer questions intelligently. Her skin was cold and clammy, and the whole abdomen distended and hard. It looked as if she would surely die, but she was making such a brave fight that we felt it our duty to lend Nature a helping hand. The patient was in no condition to take an anesthetic, so, under cocaine, I made two openings, one over the original abscess on the right side, and the other in the median line. Through the first opening the old abscess was drained. The appendix could not be felt, and was not sought for. Through the median opening large soft-rubber tubes were introduced into the left flank and to the bottom of the pelvis. There was a very free discharge of pus. The patient soon began to improve, and at the end of a month she went home with her wounds healed. This may not have been brilliant surgery, but it was helpful surgery and saved this mother for her three little children.

No effort was made in these cases to break down all adhesions, and no irrigating was done. During the after-treatment these patients were stood neither upon their heads nor their heels, but were placed comfortably upon their backs, and after a few days were allowed to change position at will. The exact position of these patients is of very little consequence, so it is better to make them as comfortable as possible. The pressure within the abdomen is about sixteen pounds to the square inch, and the pus is bound to follow the line of least resistance, which is along the tubes through the openings in the abdominal wall.

One serious mistake often made is to plug the openings with gauze and call this drainage. Gauze does not drain pus, and when the pus es-

capas in the presence of gauze it is in spite of the gauze, and not by virtue of it. The pus escapes around the gauze and not through it. We use gauze in the abdomen to protect the uninfected parts from pus, because we know that the pus will not readily penetrate the gauze, therefore it is absurd to expect gauze to drain pus. If left long enough the gauze becomes saturated with the pus surrounding it, but its capillarity is completely destroyed. In the two cases just cited, gauze was placed lightly inside of the wounds to prevent protrusion of the bowels for a time, great care being exercised that it did not cork up the openings.

After operation these patients should be treated after the method of Ochsner—without food and, above all things, without cathartics. Nature has put the intestines at rest, and we are interfering with her whenever we give cathartics. We all feel better when the patient's bowels move, because this is an indication that he is better, but Nature knows when and how to do this better than we do, and we should not interfere. We should remember that the patient's bowels move because he is better, and that he is not better because his bowels move.

DISCUSSION

Dr. Archibald MacLaren (St. Paul): Dr. Moore has given a very excellent description of this condition, and the best of advice, which will certainly be followed by good results, providing the treatment he has laid down is carried out.

I agree with Dr. Moore almost entirely in his conclusions. For a number of years I have followed, very faithfully, the line of treatment which has been so well described by Ochsner, i. e., of operating upon all cases of acute appendicitis and removing the appendix when seen in the first forty-eight hours. After that time, and these are the cases which Dr. Moore has brought up for our consideration, I have waited until the formation of the circumscribed abscess, which is usually about the seventh or eighth day. Ochsner believes that practically all cases will go on to the formation of a circumscribed abscess, if they are not given cathartics. My experience in this class of cases is, that they have all had cathartics sometime in the course of their disease, before we have seen them. The natural and first household remedy is the cathartic in every case of stomach-ache. Long before the physician is called the patient has had his cathartic.

In my own statistics the mortality in my last 200 abscess cases, was four deaths in the cases operated upon, and three deaths in the cases which we were watching, hoping that they would come to a safe operative time—a total mortality of three and one-half per cent. Then we must remember that these cases are to a certain extent selected cases. Many of the worst ones are so ill that they cannot be transported and never reach the hospital. In these 200 abscess cases there were many serious complications, the most

common after-result was the formation of a later secondary abscess, which did not drain through the tube in the abscess-cavity.

Fifteen times it has seemed necessary to me to open and drain the secondary accumulation of pus through the rectum. In women this drainage was always through the vagina. As my abscess cases were practically one-half women and one-half men, this made the percentage of rectal drainage about fifteen per cent; and of these fifteen cases all but one recovered.

In my earlier experiences most of these secondary abscess cases died. These secondary abscesses are sure to occur in a large percentage of appendiceal abscesses treated by every surgeon.

The line of treatment that is sometimes advised by the very best of men is, that when these secondary abscesses form we should do nothing but stand by and see them rupture into the rectum. This is, in my judgment, a surgical relapse of from ten to fifteen years. I am sure, from my experience, that rectal section is no more dangerous than vaginal section, that it conserves the vitality of the patient, hastens his recovery very greatly, and helps to prevent the formation of that very dangerous condition, subphrenic abscess. Some of my friends have been draining the cul-de-sac by an incision through the perineum, keeping well to the side to avoid the bladder, ureter, and the seminal vesicle. I do not feel that I am a good enough anatomist to make this deep dissection; and then, again, it is not necessary.

Since last spring, after learning of Van Buren Knott's experience with appendiceal abscess, I have followed his plan with the greatest satisfaction. Dr. Knott operates upon every appendiceal abscess case as soon as it is diagnosed, separating all of the adhesions necessary to get the appendix. He explores the cavity thoroughly enough to find all secondary abscesses, again separates the adhesions enough so that all abscesses may drain into the cul-de-sac, and then a large rubber tube is passed to the bottom of the cul-de-sac through a second stab-wound over the symphysis.

No drain is introduced into the wound over the damaged bowel, and the original wound is closed. I have treated 25 cases after this plan without complication and without death. Dr. Knott's experience, two deaths in 170 operations, is better than any results in a similar list of cases that I am acquainted with.

Dr. J. S. Seeley (Faribault): Even if I have never seen an appendiceal abscess, I am willing to go on record in making the statement that when we are sure pus has formed it is never too soon to give it vent by the most desirable route.

Dr. F. A. Dunsmoor (Minneapolis): I would like to emphasize what Dr. Moore said about the influence of elapsed time and what to do in each case. In the first place, it is not the elapsed time, it is the condition of parts that is important. It does not say forty-eight hours, but any time immediately after the appendix has perforated. If we could make absolute diagnosis, we should all know what to do. That most eminent surgeon, Dr. J. B. Deaver, in the German Hospital, Philadelphia, while giving a clinic, asked what condition he should find when he opened the abdomen in a certain case, and the students glibly told what the pathology would be. Dr. Deaver said: "I talked like that when I had operated on 300 cases of appendicitis, but since I have operated on over 4,000, I do not know

what I am going to find before I make the incision." If a man is not prepared when he enters the abdomen, to cope with what he does not expect, he had better stay out and let somebody else operate.

If an abscess is present, it should be drained, and the earlier the better. There should be an elimination of all infectious matter preliminary to the process of removing the appendix. A temporary coffer-dam built of iodoform gauze around the abscess, will permit a complete removal of the appendix and the pus without contaminating the general abdominal cavity. A normal salt solution is less deleterious in the abdomen than is pus itself, particularly if it is new, and saline irrigation is to be used when pus is free in the peritoneal cavity.

Dr. Moore has told the truth about gauze drainage, but tubes or solid rubber bougies may be used to advantage, either, as Dr. MacLaren has suggested, in the cul-de-sac or incision through the rectum, or, as the essayist has said, the anterior abdominal incision should be closed and then drain through the loin posteriorly. We must respect the teaching of Dr. Murphy in all these cases when there is present a danger of peritonitis, and remove the source of infection. Put the patient in the Fowler position and give constant enteroclysis per rectum.

My firm conviction is that the expert surgeon will operate on each case immediately after it comes to him, with confidence that skill will prevent contamination, and eliminate the pathological condition already present.

Dr. W. H. Magie (Duluth): I am somewhat interested in this discussion of appendicitis. Some six years ago at Atlantic City, during the session of the Surgical Section of the American Medical Association, I heard a great discussion which took place as the result of a paper read on appendicitis, by Dr. Deaver of Philadelphia, in which our friend Ochsner participated, reporting a series of 1,000 successive cases operated on by his method with a mortality of only 2.2 per cent.

I was very greatly impressed by Ochsner's low mortality. On my return home I made up my mind to follow Ochsner's methods as nearly as I was able to do so. I then formulated a plan along lines similar to Ochsner's, at which, after the first 48 hours during

the height of the septic stage, I did not operate. In cases of acute appendicitis seen within the first 48 hours I made it a rule to operate at once. I am now speaking of the acute infective type. If the cases come to me on the third or fourth day with apparent acute sepsis or infection as characterized by accelerated pulse, temperature 102 or 103 degrees, then I do not operate at once, but put the case on the Ochsner method of treatment as far as advisable, excepting the routine practice of washing out the stomach. I have occasionally resorted to this procedure, but have not made it a rule; consequently I have not carried out the Ochsner treatment completely. At this time I also learned through Dr. J. B. Murphy that it was bad practice to use water in the abdominal cavity in certain cases of inflammation with diffused peritonitis. At that time I also adopted Dr. Murphy's plan in these cases, together with Ochsner's. Since then I have operated nearly four years in succession without a death from appendicitis. I cannot at this time say what the exact number of acute infective cases was, but I am sure that fully half of the total of 376 cases were of this type.

I became so enthusiastic that I deemed it almost impossible to lose a case of appendicitis treated by the Ochsner and Murphy method. Finally, in June of this year, I had my first death. This case developed pneumonia on the fifth day and died within twenty-six hours.

I believe I learned a great fundamental principle in learning to avoid, if possible, operating during the height of the septic stage while the blood is loaded with the products of the early absorption of septic material and before sufficient time has elapsed for the process of leucocytosis to have become established.

I have applied these principles to other infective cases with equally good results.

I am satisfied that we should continue to practice the forms of treatment outlined by Drs. Ochsner and Murphy.

Concerning the removal of the appendix in certain abscess cases with severe sepsis: it is my practice to let it alone. I do not think I have to remove the appendix at a later operation more than once in a hundred cases. It is a very rare occurrence that it gives any future trouble.

IODINE IN SURGERY

By F. E. WALKER, M. D.

Surgeon to Our Lady of Lourdes Hospital

HOT SPRINGS, S. D.

Surgical cleanliness has been a subject of vast importance during the past twenty years, and yet has not reached the state of simplified perfection desired, although the methods now employed are more simple, just as efficacious, more easily maintained, and accompanied with just as good or better results than at any time in the history of surgery.

During the past seven months we have changed the technic in our clinic, both in the preparation

of the hands of the surgeon, assistants, and nurses, and also the preparation of the part to be operated on. We have employed this method in over four hundred operations with just as good success as in the former method, and because of certain material advantages we find it far superior in many respects.

SURGEON AND ASSISTANTS

1st. The hands are thoroughly scrubbed with

soap and water followed by a thorough cleansing in a normal saline solution.

2d. Harrington's solution is then thoroughly applied and the hands left moist until the gown is put on.

3d. Alcohol is used to wash off Harrington's solution, the hands are dipped in a hypertonic salt solution and thoroughly dried, and dry sterile gloves and sterile stockinette sleeves are put on.

4th. The gloved hands are washed in a hypertonic salt solution as deemed necessary during the progress of the operation.

THE PATIENT

1st. The night before operation the patient has the usual full bath and thorough soap and water scrubbing of the part to be operated on, followed by cleansing with normal saline and alcohol. A dry sterile pad is then firmly applied.

2d. After the patient is placed on the operating-table and is under the anesthetic, the dry pad is removed and full strength tincture of iodine is well applied, the sterilized sheets and towels are arranged, and the operation is commenced.

Full strength tincture is used in all cases and for all operations except within the vagina or the rectum. In these organs we use one-half iodine and one-half water.

The advantage of our present method is—

1st. The technic is simple. There are no wet pads, towels, or dressings. The table and patient are always clean and dry, which is a most valuable consideration.

2d. It is very easy to use, saves a great deal of the time of the nurse, and can be applied quickly.

3d. The amount of anesthetic is considerably lessened, the patient does not remain upon the table so long, and there is no undue exposure.

4th. There is no disturbance to the patient, and the entire surgical atmosphere is more placid and peaceful.

Dr. Geyerman, of our staff, has been using it very extensively in his genito-urinary work and has frequently used it in the bladder, in one-half

dilution, with the most satisfactory results. In three cases of kidney infection he injected a one-half of a one per cent solution through the ureter catheter, with marked success in two cases. The third patient required surgical drainage. The full strength is always used within the uterus, but gauze drainage should always be used; in fact, whenever iodine is used in closed cavities gauze should always be inserted. We also use the full strength upon the appendix, stump, and raw surface of the uterine horns whenever the tubes are removed, whether infection exists or not.

In all bone work requiring the chisel or the curette and in all indolent wounds the full strength is used. In the latter cases a heavy and a nearly air-tight bandage should be applied.

The following points are of especial importance whenever iodine is used:

1st. Always secure as dry a condition as possible of the skin, bone-cavities, and all other cavities exposed to the air. This is especially important in emergency work.

2d. Always use in full strength on all mucous membrane where inflammation is due to infection. It must be remembered that all such cases should be drained with gauze.

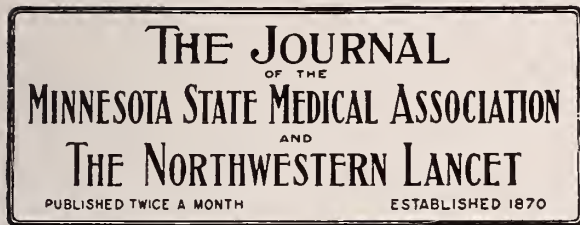
3d. Whenever used in any strength in closed cavities, such as the urinary bladder or uterus, either thoroughly douche with saline solution and hydrogen peroxide or insert a drain. (It is better to use a small gauze drain.)

4th. Do not use iodine in combination with other drugs. It should always be used alone. If it is desired to dilute the tincture, use water.

5th. Do not use a hypertonic salt solution, Wright's solution, or hydrogen peroxide for twelve to twenty-four hours after using iodine.

6th. Never use the full strength in the vagina or rectum.

7th. In all indolent wounds or ulcers, apply a bandage as nearly air-tight as possible for twelve to twenty-four hours after a thorough application of iodine.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

FEBRUARY 15, 1911

COUNTY HEALTH OFFICERS

It is very essential that the subject of county health officers should be discussed with various organizations, which are to form the health departments of a municipality or county. It is notoriously known that in the smaller country town the average general practitioner declines, for various reasons, to serve as health officer. One reason is, that he has occasion to send patients of his own and those of his confreres into quarantine if an epidemic is in progress; and it is a matter of great distaste to him to quarantine his own cases, and usually causes jealousy or hard feeling if he quarantines the cases of his fellow practitioner. Another important reason for his declining the office is, that the salary paid is so ridiculously small that it is really an insult to his profession.

The time has come, however, when these personal disputes, inconveniences, and low-fee systems will have to be changed into something better. If the permissive bill now before the legislature goes through at this session, it will create an entirely different sentiment regarding the work of the sanitarian. Let us illustrate by relating one of the difficulties of a town of moderate size in southern Minnesota. The health officer was a general practitioner, a busy man, and for his service he received \$12 per month. During the summer the Woman's

Civic League discussed the feasibility of combining the office of the health officer and the medical school-inspector. They laid their plans, and the entire proposition was to be financed by several worthy gentlemen who were anxious to see the experiment tried. The health officer, however, opposed the scheme and was so successful that the plan was abandoned. Shortly after this an epidemic of scarlet fever arose in the city, which got beyond the health officer's line of inspection. He found that the cases were not reported to him by the practitioners, and he also found it impossible, for lack of time, to visit all the cases that were suspected. The result was that the schools were closed, and two trained sanitarians from the State Board of Health were sent down to investigate and line up all of the suspected cases, and trace them to their various sources. After two or three weeks of sharp, hard work the epidemic was successfully controlled.

This is the sort of thing which happens frequently, and will happen more frequently unless some steps are taken to provide better men, pay them better fees, and make them more efficient in their work to follow out the regulations which have been adopted for them and for the protection of the public health.

The time must come when the health officer will be recognized as a man with police powers, a man to respect, because he will be able to solve the epidemiological situation, and to stamp out the ravages of communicable diseases. Municipal councils, boards of education, and local and state boards of health must all unite in this work in order to make it a success, but this cannot be done unless the man in the smaller town is willing to give his personal assistance to carry out faithfully the spirit of sanitation.

THE UNIVERSITY HOSPITAL AND THE POOR

It is evident that there is still a misunderstanding between the physicians of the country as regards their relations to the University Hospital. Every physician in Minnesota has been circularized more than once, and the matter has been published in these columns, and yet this mass of printed instruction seems to have been thrown into the waste-basket or seemingly grossly misunderstood.

The University Hospital buildings now comprise one large modern structure, to be ready by

the first of June for occupancy, and several smaller department hospital buildings, which have been in operation for two years, and most of them full of patients, but as yet an insufficient number of patients have been received from the country. Some physicians have blamed the Hospital authorities for this omission, claiming that when they wanted patients committed there were no vacancies. The men in the country have been discouraged at what they called a mass of "red tape," to insure the commitment of a patient. If they stop to consider a moment that no patient can be committed to any hospital without due conformities to necessary regulations their criticism against the University Hospital will appear unjust.

Proper application-blanks will be sent to any physician who inquires, and, if they are properly filled out, the physician may expect an immediate reply, either by letter or wire, advising him whether his patient is a suitable case, or whether there is a vacant bed in the hospital building for him. The sending in of outside cases from the country towns is to be encouraged by the country physicians, and yet a rather singular objection on their part has been given, namely, that if a physician sends his poor cases into the city he will be criticised at home for not being able to take care of his patients. Physicians also fear criticism on the part of their colleagues, and some of them fear the criticism of differential diagnosis. All of these objections should be waved in the interest of the patients and of the University Hospital. It has been the earnest wish of the Hospital management that physicians from the country shall bring their cases to the hospital, study with the attending physician or surgeon the diagnosis, and, if a surgical case, watch all procedures. Every physician who sends a case to the University Hospital will be advised from time to time of the patient's progress or condition, to show any change of diagnosis, and in case of death the autopsy-findings will be forwarded with the same degree of care as if the patient had been sent by one practitioner to another practitioner, and looked upon as a straight fee-case. In short, all the courtesies that are observed between physicians are expected to be observed in the work of the University Hospital in association with the country doctor.

THE SPECTATOR AGAIN

It is exceedingly gratifying to know, from many of our readers, that the Spectator has re-

ceived a hearty welcome. We felt confident, when introducing him, that he would be at home "in our circle."

We neglected to say in our foreword that our plan is to have this department appear, for the present, only once a month, but an occasional extra appearance may be called for by the state of our readers' health. As we are giving them, in this case, "absent treatment," we cannot well tell when to "demonstrate" unless we hear from them. If more of our friends want to express their welcome to him, they may depend upon us to convey to him their words of appreciation and welcome, and he may thus be induced to make regular visits, instead of coming only once a month.

SOCIETY REPORTS

It is to be greatly regretted that the secretaries of county societies do not make fuller and better reports of the meetings of such societies; and it is little short of discreditable (we had almost said disgraceful) that many secretaries will make no reports at all. We have never been able to understand why men will accept office year after year and then persistently neglect or refuse to perform the simplest duties of that office in a manner demanded by the office and the needs of the organization. We are always ready to condone and make excuses for the busy and hard-worked physician, but for the man who wants to enjoy the honor and the credit of some office, without performing the duties of that office, we have feelings of—pity.

THE JOURNAL-LANCET has attempted to maintain a department of "Society Reports" for the publication of official reports exclusively, leaving the unofficial reports to appear in our "News Items." The failure of county secretaries to supply such reports or even to send verified and corrected newspaper reports of their meetings, has made it difficult for us to conduct the department of "News Items" as we otherwise would. To illustrate: we can obtain, through correspondents and local newspapers, a pretty full report of all society meetings, but the newspaper reports are often full of errors and omissions, and should not be depended upon except when revised by some one able to do so, and the other report would not be official. As Secretary McDavitt has furnished all county secretaries in Minnesota with suitable blanks for making reports we do not wish to use the unofficial ma-

terial on hand to make an item for our "News" department when an official report may be, or should be, forthcoming.

The situation is very annoying to the editor, and he trusts that this warning and appeal will be heeded by the secretary of every society in Minnesota and in other states in the Northwest.

THE SPECTATOR

One advantage of being sick a few times during your life is the experience of it. "Experience," says St. Paul, "worketh hope." The experience of sickness worketh the hope that you will recover; that is to say, if you have had the experience of sickness you will not be apt to tell your wife every time you are doubled up with a desperate pain that you think you are going to die immediately. Hope is one of the best "first aids" to the injured. If the sick man or his wife do not have it in stock, it should come in the doctor's medicine-case. This observation is born of experience. One morning a good many years ago when the Spectator had spent a peculiarly distressing night and knew by his own symptoms that he was rapidly growing worse, he tossed in his fever and complained to the faithful Sue that the doctor was not keeping his morning appointment. The telephone was invoked, but the doctor was out on his rounds, and no one knew where he might be or when he might come. The sick man had sent to his partner word to look up the life insurance and see if the will was in the tin box in the safe. And still the doctor did not come. By eleven o'clock gloom pervaded the sick-room like a London fog. Even Sue, who had watched all night with cheering words and prescribed medicine, was near despair.

Then of a sudden the door blew open, and a big man about the size of an ox, shock-headed and fur-clad, strode in and sat plump down on the sick-bed. He saluted the sick man and began telling some kind of a story of the outside world,—what it was we have forgotten, but so interesting that his patient was willing to hear him through before the examination of symptoms should begin. Some turn in the tale brought out the fact that the doctor had been one of the old Iron Brigade of Wisconsin during the Civil War. Now, it so happened that the patient was absorbingly interested in the his-

tory of the Civil War, and particularly so in the history of the Iron Brigade. He rallied enough to ask questions. This kept the doctor busy so far beyond his usual calling time that he rose to go without much ceremony. He gave some brief directions as to the medicine, and as he buttoned up his furs he said: "If you're as much better tomorrow morning, my boy, you won't need me any more." "Oh yes, doctor," said his patient, "come tomorrow morning anyway." There were some points about the Second Battle of Manassas on which the patient wanted further light. Then for pure shame he set to it and recovered.

* * *

"A cheerful heart," says an old Hebrew proverb, "doeth good like a medicine." My old doctor's cheerful heart cheered his patients, because they knew that above the heart was a level head, leveled by long and urgent experience. Had the physician been a light-headed lad just out of school practicing the cheerful face, as he had been told to do while in the medical college, the patient might not have been so ready to trade off his gloom for the doctor's cheer. A cheerful heart must have something substantial to do its cheering on. There is nothing like successful practice to give a practitioner a backing for his cheer. It is with the doctor as it is with the patient: "Experience worketh hope."

Nearly half a century ago when armed unpleasantness existed along Mason and Dixon's line, a band of Confederate horsemen broke over the sacred Ohio river and ran loose and lawless over Ohio soil. The Ohio militia were called out to stop them. The militia found but a scattering string of horsemen coming up the pike, and they blazed away at them by company volleys according to orders. Now, according to all the rules of war, one-half the horsemen should have fallen and the other half have been almost scared to death. But when the smoke of the shooting had floated upward the militia saw these few rascals dismounting with speed, and coming straight toward them, firing as they came. Instead of being dead they seemed to be just beginning to enjoy the game. Such unnatural conduct was so uncanny that the militia retired to the next hill to get a better view of the thing at a safer distance. It was not till some of the older, smoked-up fighters from the front came into Ohio that Morgan's men retired. The only difference between these soldiers was that those in fresh blue had had no experience while those in faded gray had had nothing much else for about three years. It is a pity

that the doctor and the preacher cannot come from school to their work seasoned with experience; but honest, bruising experience will very soon make a veteran. There were veteran regiments in the Civil War made up of men whose ages would not average above twenty-one years.

* * *

Anyone with a healthy interior will naturally radiate sunshine. The gloomy man, the petulant man, the steadily stern-faced man, are all more or less askew physically and metaphysically. It is safe to say that God made man and the world in which he lives good. The Scripture says that He himself pronounced it very good. If this is true, then any normal man in this normal world ought to feel every morning that it is good just to be alive. And if a man has done a normal day's work, he ought to feel better at sundown than he did at sunrise. If we appreciated the fact that human gloom and moral acid are products of wholly avoidable disease, we might be like my old physician's patient, so humiliated that we would set to work and recover for very shame.

CORRESPONDENCE

THE MANAGEMENT OF THE PUERPERIUM

St. Paul, Feb. 10, 1911.

TO THE EDITOR:

Dear Sir: In your issue of February 1st appears an article on the above subject, by Dr. Leavitt of St. Paul, and I cannot allow his statements to pass without question. While there are many excellent points brought out in the paper there is much in it that I deem dangerous, especially for a student of obstetrics. Let us consider some of the points.

1. *The douche*—Dr. Leavitt says, "I would eliminate the douche, both before and after labor." I heartily agree with him that douching is bad before labor, in fact, is meddlesome; and daily douching during the puerperium is uncalled for and dangerous, but there is no reason why after the labor is over that a hot normal salt or lysol douche should not be used; in fact, there are several reasons why it is even beneficial. It helps greatly in proper contraction of the uterus, and thus is a prophylaxis of relaxation and increased hemorrhage. It removes clots from the vagina.

2. The immediate repair of lacerations or the later attention is to be decided as an individual factor. As a rule it is generally better to repair at once and thus save the patient the necessity of taking an anesthetic some days later. Immediately following the birth of the child, before the placental delivery, is an excellent period to do this; besides, but little anesthetic is required, as the parts are more or less insensitive from the stretching to which they have been subjected from the passage of the child. Disturbing a woman several days later is, to my mind, better avoided, especially at a time when lactation is being established.

3. The subject of involution is important, and I would ask Dr. Leavitt to go to his books and study the pathology of involution before he gives such strenuous advice as to allow any patient to get out of bed the day of delivery to empty the bowels or the bladder. That this has been done hundreds of times without trouble is no reason that it is wise or safe. There are changes in the cardiac muscle, as well as uterine, that should be thought of at this time. It takes from six to eight weeks for the uterus to return to its normal state. The uterine ligaments have to regain their tone. Bed postures accomplish much, but to hurry out a labor case from bed at this period is actually dangerous, and foolhardy. To liken the modern woman of today to the aboriginal is an almost inexcusable comparison, and I can truly state that I have personally known of absolute harm developing from forcing aboriginality on modern women as we find them socially today.

I know the nearer to the animal nature a human being approaches the less liability to show after-effects. Subinvolution will follow the "race-track" advice of early, i. e., too early, leaving the bed. If ever our patients need rest and careful thought it is at this time. We should be careful not to overdo this bed-staying, but ten days to two weeks is a safe, sane average. True labor is a physiological process, but nature's methods of returning from one condition of nature to its condition before that supervened should be carefully weighed.

May be several hundred women have followed Dr. Leavitt's directions of early rising from labor, as he advocates; but I would truly like to know the percentages of after-troubles that might have been avoided had less haste been used during their lying-in period.

CHAS. F. DENNY, M. D.

"606"

Albany, N. Y., Jan. 25, 1911.

TO THE EDITOR:

Erlich's advocacy of the use of "606" in syphilis has attracted much attention to the various organic arsenic preparations, and many practitioners have suggested the use of the latter as a substitute for the former.

As one of the authors of the only article thus far published (Dawes and Jackson, *Journal of the Am. Med. Ass'n.*, June 22nd, 1907, p. 2090) which gives an authentic description of the physiologic action of sodium cacodylate based upon pharmacologic investigation and clinical observation, I shall esteem it a favor if you will publish a request in your paper that anyone who desires information on sodium cacodylate, or anyone who has used the drug, successfully or not, communicate with the undersigned.

SPENCER L. DAWES, M. D.

255 State St., Albany, N. Y.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Minneapolis Club, Minneapolis, Wednesday evening, Feb. 1st. Dinner was served at 7, and the meeting called to order at 8:20 by vice-president Rothrock.

After several matters of business had been disposed of Dr. A. W. Abbott presented a specimen of an appendix which, at operation, presented a very unusual aspect. He at first thought it was carcinoma, but found, instead, that it was a diverticulum, with extensive inflammation of the wall of the appendix.

He also referred to the case of double uterus reported by him at the December meeting. He had looked up the matter, as he then promised he would do, and finds there are three authentic cases on record of double uterus, each with a separate vagina and vulva.

Dr. F. A. Dunsmoor presented a specimen of appendix that had been removed with great difficulty. It was in a large pouch in close relation with the cecum, which was filled with stones and pus. Its removal was followed by prompt recovery. He also reported, briefly, the case of a man recently under observation who had been slightly injured by falling from a freight-car because of the coming off of the man-hold. He was taken to the hospital, where a careful exam-

ination revealed no evidence of serious injury. It soon became evident, however, that he had suppression of urine. In nine days he passed but eleven ounces of urine. A special nurse was put on the watch, and so far as could be discovered he did not pass more than a few drops each day. On the 16th day he voided four ounces of urine with a sp. gr. of 1024, and from that time on he returned to normal amounts. During this period he had been very hungry, and had eaten ravenously when allowed food, but had frequently vomited shortly after eating. He had no elevation of temperature during the entire period.

Dr. J. Clark Stewart presented a very curious old instrument, known as the "Wizer" instrument, for the cure of hernia. It had come to him from an aged relative who was a surgeon in the south. Dr. Stewart proposes to place it in the museum of old instruments at the University.

Dr. F. R. Wright reported at considerable length a case of "misplaced kidney."

Dr. Gustav Schwyzer reported a case, and exhibited x-ray plates of the fracture of both legs in a woman who was run down by an automobile. One fracture was compound, the other sub-cutaneous. He had reduced both with great care and dressed them with plaster casts, leaving a window in one for the treatment of the wound. X-ray plates after dressing showed both the bones in excellent position. After five weeks, however, he found that there had been no union in the compound fracture, and an x-ray at that time revealed great displacement of the fragments. He then put on an extension and increased it up to 40 pounds, and arranged upward pressure on one fragment and downward pressure upon the other until he had secured proper coaptation. Gangrene had occurred in the skin about the foot from the enormous pressure of the extension, but this he had disregarded. Good union of the fracture had followed this treatment. For the sloughing skin he had used a salve of 5 per cent of scarlet red, under which the healing process had been marvellously rapid.

Dr. A. E. Benjamin reported having removed today Lane's bone-plates from a case of fracture of the thigh in a lad of 14. The x-ray showed excellent results.

Dr. H. P. Ritchie spoke of the relative efficiency of antiseptics. He referred to a discussion at a recent gathering of surgeons which he had attended, upon the use of iodine and alcohol for this purpose. In case of crushing injury to the foot of a brakeman he had directed that the leg

be painted immediately with iodine to the margin of the wound, and a half hour later, while giving the anesthetic for operation, the wound was swabbed out thoroughly with iodine, and then with alcohol. Although the wound was a very dirty one, as such wounds usually are, the operation was followed by complete primary union.

In discussing Dr. Dunsmoor's case of the suppression of urine Dr. Sweetser cited an instance where, some years ago, he saw a man who had been in a terrific explosion. At autopsy it was shown that the man had sustained a rupture of the kidney. There had, however, been no blood or bloody urine in the bladder. He raised the question as to just what effect these severe concussions may have upon the secretion of the organ.

Dr. Rothrock called attention to the fact that hysterical anuria has occurred with vomiting, in which urea has been found in the vomitus.

Dr. Dennis referred to a case which he reported some years ago, in which he had removed an only kidney. The patient had died from uremia a few days later.

Dr. Herbert W. Jones, of Minneapolis, then read his inaugural thesis, entitled "Brain Tumor." The subject was discussed by Drs. Dunning, Hamilton, and Head.

ARTHUR W. DUNNING, M. D., Secretary.

CAMP RELEASE DISTRICT SOCIETY

The Society met at Renville on January 26th, with six members present.

Officers were elected as follows:

President, Dr. F. H. Hacking, Granite Falls; vice-president, Dr. F. W. Penhall, Morton; secretary-treasurer, Dr. R. D. Zimbeck, Montevideo.

The next meeting will be held at Morton on April 27th.

R. D. ZIMBECK, M. D., Secretary.

NEWS ITEMS

Dr. A. C. Lindberg has moved from Finlayson to North Branch.

Dr. George Monteith, of Blanchardville, Wis., has moved to Hazleton, N. D.

The Chute Sanitarium, of Rochester, has been sold to W. L. Towner, of Rochester.

Dr. W. S. Reynolds has moved from Hibbing to Virginia, both lively towns on the Range.

Dr. and Mrs. William W. Mayo, of Rochester, celebrated their sixtieth wedding anniversary on Feb. 2d.

A bill has been introduced in the legislature to re-establish in the State University a college of homeopathy.

Dr. E. M. Gans has resigned from the staff of the More Hospital of Eveleth, and will locate in North Dakota.

The patients and employees of the State Sanatorium at Walker gave Dr. Marcley a farewell benefit last month.

Dr. Ernest A. Le Bien, of McHenry, N. D., was married in January to Miss Cassie M. Husher, of the same place.

We understand that Minnesota Lake has no physicians, Dr. Merton Field, of that place, having moved to Canby.

Drs. Thomas McDavitt, Herbert Davis, and H. J. O'Brien, of St. Paul, have returned from a pleasure trip to Florida.

Drs. A. M. and F. W. Burns, of Milan, have opened a \$10,000 hospital. Donations amounting to \$1,600 were made by citizens.

The hospitals of Fergus Falls have a new ambulance, which was purchased for their common use with the funds raised on tag day.

The physicians of Billings, Mont., are giving "talks" on medical subjects to men, who meet Sunday afternoons in the Y. M. C. A. building.

Sturgeon Bay, Wis., is to have a general hospital. Dr. F. C. Huff has been the leader in the movement. Miss Florence Scofield, a professional nurse, will be in charge.

The president's report at the first annual meeting of the White Bear Hospital Company showed that the business was much in excess of what has been promised by the promoters.

Dr. W. H. Buskirk, of Miles City, Montana, formerly on the staff of the Northern Pacific Hospital at Brainerd, was married last month to Miss Gladys Towers, also of Miles City.

The Northwestern Hospital at Moorhead has been incorporated, with a capital of \$80,000. It is hoped to have sufficient funds to conduct the hospital on the best lines of hospital management.

The Swedish Lutherans are all at sea over the proposed hospital to be located in Duluth or Superior. They will, without doubt, build a fine

hospital in one of these cities and at a comparatively early date.

Dr. George H. Walker, a graduate of the State University, Class of '99, and now associated with Dr. W. P. Lee, of Fairfax, was married last month to Miss Louise Feton, a graduate of St. Luke's Hospital of St. Paul.

There is a bill before the legislature of North Dakota for the establishment of a tuberculosis sanatorium, to be located at Dunseith, in that state. The measure will have the support of the best newspapers in the state.

Dr. John C. Cockburn, of Minneapolis, died last week at the age of 69 years. Dr. Cockburn was born in New Brunswick, and graduated from Harvard in 1868. He came to Minneapolis in 1880, where he has practiced since that date.

It is reported that an agreement has been reached between the regular practitioners and the osteopaths of North Dakota upon a bill to be presented to the legislature. The bill on which a bitter fight has been waged has been withdrawn.

The Nu Sigma Nu society of the State University held its annual meeting and banquet on February 4th, with a very large attendance, Dr. A. J. Gillette acting as toast-master. A number of physicians from outside of the Twin Cities were present:

The German Baptists Associations of North and South Dakota have appropriated \$25,000 each for a hospital which will probably be located at Aberdeen, S. D. Aberdeen citizens will add a considerable amount to the sum raised by the Baptists.

Dr. R. I. Hubert, of St. Cloud, will move to St. Paul. He will have charge of the practice of Dr. G. A. Renz during the latter's trip abroad which he will take for special study in Vienna. Dr. Renz will leave next month and be absent about six months.

The Nurses' Training-school of the State University Hospital took in a class of five on February 1st. More could have been received, but there were no more applicants, and this in spite of the fact that the opportunity is unexcelled in Minnesota.

Red Wing, Rochester, and some other cities of Southern Minnesota went baseball mad last summer, and as a prophylactic measure Red Wing has elected a physician, Dr. W. H. Cremer,

president of his baseball association. Rochester might engage a ward in the state institution at that place.

The St. Paul City Council has refused the permit for the establishment within its limits of a sanitarium for the care of nervous cases, asked for by Drs. Arthur Sweeney and Haldor Sneve, of St. Paul, and Dr. W. A. Jones, of Minneapolis. The institution will probably be located in Minneapolis.

The Minnesota Academy of Ophthalmology and Otolaryngology was organized last week by the Twin City physicians and surgeons engaged in these specialties. About thirty of the Twin City men met at the Minneapolis Club and organized the society, electing the following officers: President, Dr. H. McL. Morton, Minneapolis; first vice-president, Dr. J. W. Chamberlin, St. Paul; second vice-president, Dr. John F. Fulton, St. Paul; secretary-treasurer, Dr. E. H. Parker, Minneapolis; council, Drs. F. E. Burch, Frank C. Todd, and W. N. Porteous. Letters and telegrams of congratulation were received from prominent specialists in the East. The Academy will meet monthly.

The meeting of the staff of the Swedish Hospital of Minneapolis was held Jan. 17th. Dr. A. E. Johnson was elected chief-of-staff for the ensuing year, and Dr. O. A. Olson, secretary. The hospital has made great progress during the past year. An x-ray department, with a complete equipment, has been installed, and excellent work is being done. A dark-room has been provided, so that pictures can be taken and developed in a few minutes. The advantage of having first-class x-ray work done in the hospital, rather than at the physician's office, has been of great value to the visiting staff. During the year 1910, 2,482 patients were admitted and 2,006 operations performed. A maternity department of thirty beds has just been opened. This department is new and thoroughly modern in every respect. A new sterilizing outfit has been bought, and will be installed in a few days.

The Women's Auxiliary Society, composed of the wives of members, and the widows of deceased members, of the Hennepin County Medical Society, effected its permanent organization last month by the adoption of a constitution and the election of officers. The officers are as follows: President, Mrs. W. J. Byrnes; vice-president, Mrs. Thomas J. Quinby; second vice-president, Mrs. J. Warren Little; recording secretary,

REPORTED FROM 72 CITIES HAVING A POPULATION OF 10,000 OR UPWARDS FOR
MONTH OF NOVEMBER, 1910.

CITIES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (1)	Puerperal Septicæmia
Albert Lea	4,500	5,657	7									1				1	
Anoka	3,769	4,053	6			1								1			
Austin	5,474	6,489	7	1	1	1											
Barnesville	1,326	1,566	2			1											
Bemidji	2,183	3,800	9	1		2								2			
Blue Earth	2,900	2,364	12					1									
Brainerd	7,524	8,134	6											4			
Chaska	2,165	2,085	1														
Cloquet	3,074	6,117	10	1		1	1							1	1		
Crookston	5,359	6,794	8	1				1						1			
Detroit	2,060	2,149	5					1									
Duluth	52,968	64,942	82	9		8		5						9	3	3	
East Grand Forks	2,077	2,489	2	1													
Ely	3,712	4,045	2											2			
Eveleth	2,752	5,332	7											1	2		
Fariabault	7,868	8,279	10			2	1										
Fairmont	3,440	2,955	2														
Fergus Falls	6,072	6,692	9											2		1	
Granite Falls	1,214	1,340	1	1													
Hastings	3,811	3,810	2														
Hutchinson	2,495	2,489	2														
Jordan	1,270	1,311	0														
Lake City	2,744	2,877	3														
Litchfield	2,280	2,415	1														
Little Falls	5,774	5,856	11	2		3								1	2		
Luverne	2,223	2,272	5											1			
Le Sueur	1,937	1,842	2														
Madison	1,336	1,604	1														
Mankato	10,559	10,936	15									1	1	1		3	
Marshall	2,088	2,243	1		1												
Melrose	1,768	2,151	0														
Minneapolis	202,718	261,974	286	36		27	5	13	3	1			1	10	15	13	1
Montgomery	979	1,281	1														
Montevideo	2,146	2,595	3			1								1			
Moorhead	3,730	4,794	3			1		1						1			
Morris	1,934	2,003	2			1										1	
New Prague	1,228	1,419	0														
New Ulm	5,403	5,720	2												1		
Northfield	3,210	3,438	2			1											
Ortonville	1,247	1,612	1														
Owatonna	5,561	5,651	8	1		1								1			
Pipestone	2,536	2,885	1														
Red Lake Falls	1,885	1,797	2														
Red Wing	7,525	8,149	8	1		1											
Redwood Falls	1,661	1,806	4														
Rochester	6,843	7,233	33	1		9			1							7	
Rushford	1,100	1,133	0														
St. Charles	1,304	1,238	1		1												
St. Cloud	8,663	9,422	7			1								1	1	1	
St. James	2,607	2,320	2														
St. Paul	163,632	197,323	180	32	2	14	3	19				1		5	12	15	
St. Peter	4,302	4,514	2														
Sauk Centre	2,220	2,463	4														
Shakopee	2,046	2,069	4												1		
Sleepy Eye	2,046	2,312	0														
South St. Paul	1	3,458	1														
Stillwater	12,318	12,435	9	1												1	1
Thief River Falls	1,819	3,502	6									1		2			
Tower	1,366	1,340	0														
Tracy	1,911	2,015	2														
Virginia	2,962	6,056	17			3		1	1				1	4			
Wabasha	2,528	2,619	2														
Warren	1,276	1,640	2														
Waseca	3,103	2,838	3	1													
Waterville	1,260	1,383	0														
West St. Paul	1,830	2,100	1														
Willmar	3,409	4,040	3			1											
Windom	1,944	1,884	2														1
Winona	19,714	20,334	24	1		3	1	1	1						1	3	
Worthington	2,386	2,276	3					1									

REPORTED FROM 65 VILLAGES HAVING A POPULATION OF 10,000 OR UPWARDS
FOR THE MONTH OF NOVEMBER, 1910.

VILLAGES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (†)	Puerperal Septicaemia
Ada	1,253	1,515	1														
Adrian	1,258	1,184	33														
Aitkin	1,719	1,896	33	1		1								1			
Akeley		1,635	0														
Alexandria	2,681	3,051	23	1													
Appleton	1,184	1,321	23														
Belle Plaine	1,121	1,301	1														
Benson	1,525	1,766	0														
Breckenridge	1,282	1,850	1														
Buffalo	1,040	1,124	1														
Caledonia	1,175	1,405	2														
Canby	1,100	1,505	0														
Cannon Falls	1,239	1,460	0														
Cass Lake	546	1,062	2														
Chatfield	1,426	1,300	1														
Chisholm		4,231	6	1													
Dawson	962	1,056	3														
Delano	967	1,023	1														
Fosston	864	1,000	1														
Frazee	1,000	1,146	1														
Glencoe	1,780	1,805	3	1									1				
Glenwood	1,116	1,718	3														
Graceville	856	1,032	0											1			
Grand Rapids	1,428	2,055	2	1										1			
Hallock	805	1,014	0														
Hibbing	2,481	6,566	10			1								1			
Jackson	1,756	1,776	3														
Janesville	1,254	1,205	4	1										1			
Kasson	1,112	1,049	0														
Kenyon	1,202	1,252	1					1									
Lake Crystal	1,215	1,231	0														
Lanesboro	1,102	1,041	0														
Long Prairie	1,385	1,256	3														
Madelia	1,272	1,290	*											1			
Milaca	1,204	1,319	0														
Mountain Lake	959	1,063	1									1					
North Mankato	939	1,129	2										2				
North St. Paul	1,110	1,400	0														
Olivia	970	1,019	0														
Osakis	917	1,056	3														
Park Rapids	1,313	1,719	3														
Pelican Rapids	1,033	1,095	1														
Perham	1,182	1,366	4										1	1			
Pine City	993	1,092	0														
Plainview	1,038	1,140	2	1													
Preston	1,278	1,320	1														
Princeton	1,319	1,704	1														
Renville	1,075	1,229	1														
Rush City	987	1,041	2	1										1			
Rushford	1,062	1,040	3														
St. Louis Park	1,325	1,491	0														
Sandstone	1,189	1,589	*														
Sauk Rapids	1,391	1,552	0														
Scanlon		1,122	0														
South Stillwater	1,422	1,572	1														
Springfield	1,511	1,546	3					1	2								
Spring Valley	1,770	1,573	*														
Staples	1,504	2,163	0														
Two Harbors	3,278	4,402	10	1		1		1						4			
Wadena	1,520	1,868	0														
Wells	2,017	1,814	1														
West Minneapolis	2,250	2,530	2	1													
Wheaton	1,132	1,346	0														
White Bear Lake	1,288	1,724	1														
Winnebago City	1,816	1,553	0														
Winthrop	815	1,031	0														
Zumbrota	1,119	1,129	1														
State Institutions			45	7		1											
Other parts of State	1,012,328	1,085,886	734	56	6	62	8	14	4	3		1	7	25	30	55	2
Total for State	1,751,395	1,979,658	1735	165	11	157	19	61	12	4	3	6	14	92	70	108	4

*No report received. Health Officer not doing his duty.

159 Still Births and Premature Births not included in above totals.

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PUBLISHER'S DEPARTMENT

THE ST. JAMES HOSPITAL AND SANI- TARIUM

The people of St. James, one of the most attractive of the smaller cities of Minnesota, were exceedingly fortunate when they obtained the well-built, attractive and commodious St. James Hotel building for a hospital and sanitarium. The demand for hotels is easily met everywhere, but the actual and urgent demand for hospitals and sanitariums is rarely met, the cost of proper buildings being too great for private enterprise.

Again were the people and managers of the Hospital and Sanitarium fortunate when the institution passed into the hands of its present local managers and staff, with such men as Dr. H. A. Tomlinson, of St. Peter, and Dr. Archibald Mac Laren, of St. Paul, as consultants.

Under the conditions now existing the St. James institution should become of the best of its kind in the Northwest.

THE AUTO SHOW—FEB. 18TH TO 25TH

The Auto Show in Minneapolis this year promises to be a de luxe edition of the handsomest set of shows seen in the West. About all that is good at the Chicago show comes to the Minneapolis exhibit, and then, besides, the local managers will put on some more frills. All this is for the entertainment of the crowds that flock to these shows.

The practical side will be a complete exposition of all that is worth seeing in the automobile line, and to the man who has, or hopes to have, an automobile, this is all-important, for here one may see all the machines, and, what is more important, may see them stripped and may see and examine all their parts, and thus decide for himself what machine meets his needs.

The show will be worth visiting both because of its pleasant attractive features, and because of its educational side.

Remember the dates—February 18th and 25th, inclusive.

THE BIG BANK VS. THE LITTLE BANK

When the largest banks of the Twin Cities began to consolidate and form a few very big banks, i. e., banks with say \$20,000,000 deposits, business men with small accounts feared, very naturally, that the courtesies common among the smaller banks would be forgotten. Happily, this is not true. On the other hand, some of the big banks seem to give special attention to the small depositors, and to extend to them greater banking privileges than they have ever had, but, of course, all this is done within legitimate banking lines.

Among such banks is the Security National Bank of Minneapolis, whose courtesies we have so often seen.

THE ELMORE AUTOS

The Elmore cars have made a distinct hit among doctors. The five 1911 models in the Elmore line meet all the requirements of professional and business men, whether they demand machines for service or for pleasure. This car has stood with physicians the severest tests of city and country practice, and the further severe test of careless and ignorant (we mean lack of mechanical knowledge) handling. Few physicians have time "to nurse or doctor" an automobile, and therefore when buying one it is well to ask for one that needs no "coddling." The Elmore, of course, being a good-looking, really a handsome, machine, will give a good return for every caress, but it will do its duty under other conditions, and so it is just the machine for inconsiderate doctors who demand good service under the trying and normal conditions of "the medical practice act."

The Elmores are sold by the Moore Carving Machine Company of Minneapolis, and will meet you at the Auto Show.

MUDBADEN

We fear that too few of our readers know of the high quality of the sulphur mud baths of the section of Minnesota around Jordan, on the Minnesota river, only a few miles from the Twin Cities.

We hear reports from physicians who have sent patients there that cannot be surpassed by the results obtained from any of the mud baths in distant states. Our readers owe it to their patients to become familiar with these conditions.

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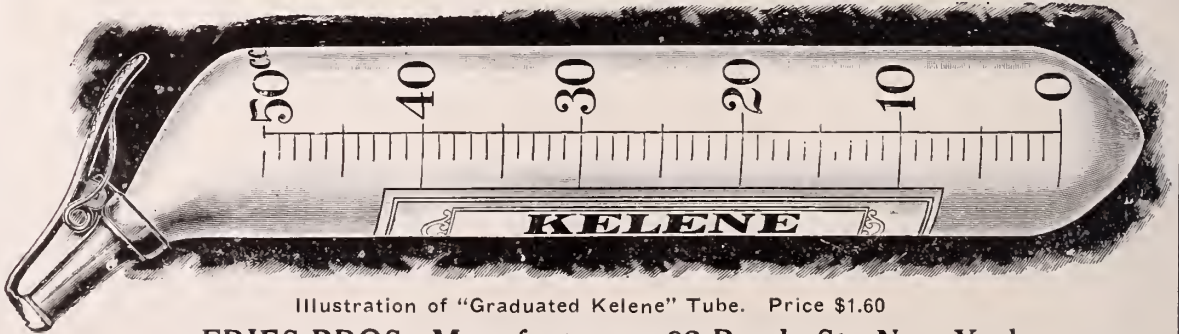


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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, MARCH 1, 1911

No. 5

MAGNESIUM SULPHATE IN TETANUS*

By CARL J. HOLMAN, M. D.

MANKATO, MINN.

I wish to submit to you a brief report of two cases of tetanus, one due to a crushing injury to the hand, and the other a very unusual one following an appendicitis abscess.

CASE 1.—Operative Case No. 1737. Admitted June 2, 1910. Died June 13, 1910. "Tetanus in Young Woman Following Crushing Injury. Signs and Symptoms, Tenth Day. One Unsuccessful Attempt to Do Lumbar Puncture. Two Successful Attempts with Injection of 5 c. c. of a Twenty-five-Per-Cent Solution of Magnesium Sulphate, the Last Dose Proving Fatal."

A young girl, about sixteen years of age, well developed, and weighing about 130 lbs., was injured on Tuesday evening by getting the fingers of her right hand into the gears of a cream-separator. The hand was dressed by the aid of the usual antiseptic methods. On Thursday morning it was found that the ring-finger was dead, and she was transferred to Immanuel Hospital, where a resection was made. She made what seemed to be a satisfactory convalescence until about the tenth day, when she began having trouble with swallowing and had slight convulsions. She was given chloretone, morphine, and other sedatives, but the spasms became more severe and more frequent. On Sunday afternoon an attempt was made to do a lumbar puncture and inject magnesium sulphate solution, but proved unsuccessful. She was given two drams of magnesium sulphate in a pint of sterile water under the skin and a hypodermic of morphine sulphate. Monday morning she was no better, and another at-

tempt to do a lumbar puncture was made, which was successful, and 5 c. c. of a twenty-five-per-cent solution of magnesium sulphate was injected into the spinal canal. This resulted in complete relaxation, which lasted for twenty-four hours, when severe spasms made themselves manifest, and another lumbar puncture was done, successfully, with an injection of 5 c. c. of magnesium sulphate solution. In about fifteen minutes she became completely relaxed and began showing symptoms of respiratory failure and died about four hours after the last injection. She had received 36,000 units of antitoxin since her symptoms developed.

To my mind the cause of death was from too large a dose of magnesium sulphate. Large quantities of antitetanic serum were exhibited, with the idea that it might dilute the toxin.

CASE 2.—"Tetanus Following Operation for the Removal of Appendicitis Abscess. Pus Confined to Appendix. Twenty-five Lumbar Punctures, 5 c. c. of a Twenty-five-Per-Cent Solution of Magnesium Sulphate Being Injected Into the Spinal Canal at Each Puncture, Extensive Paralysis Following Each Injection, or Sometimes Requiring Two or Three Injections, and Involving Usually All the Muscles Except Those of the Head, Neck, and Diaphragm; and Lasting Approximately from Ten to Thirty-six or Forty-eight Hours. Oftentimes the Injections are Followed by Severe Collapse, not Usually Alarming. Antitoxin Was Exhibited Freely as in Case 1, Copious Saline Enemata, Morphine, and Other Drugs Occasionally."

On Tuesday evening, May 31, 1910, I saw, with Dr. J. L. Macbeth, of St. Clair, Mr. F. Z.,

*Read at the 42d annual meeting of the Minnesota State Medical Association, held at Minneapolis, Oct. 5 and 6, 1910.

aged about 40 years, slightly built, weighed about 135 or 140 lbs. He had been taken nine or ten days previously with abdominal cramps and had called the doctor, who had to administer hypodermics for the pain. The doctor diagnosed the case as appendicitis and urged operation, which was declined.

The day previous to my seeing him he had visited surgeons and had been advised by them to be operated on for the relief of a mass in the right lower quadrant.

He was sent to Immanuel Hospital at Mankato, where the following morning a right-rectus incision was made. A large pear-shaped tumor-mass was found at the head of the cecum, and it proved to be the appendix with omentum bound over; and within the appendix were two or three ounces of pus.

One catgut strand was used to tie off the cecum, and a linen thread was placed around this, and the tip of the cecum was invaginated. No catgut was used to sew up the peritoneum or abdominal wall. Four strands of silk-worm gut, with two large rubber drainage-tubes, were all the foreign material that was used.

The man made a fairly good operative recovery, and the record shows that on June 19th he sat up in a chair. His pulse was 56, and his temperature was 97.4° at 6 o'clock in the morning, with the kidneys and bowels acting freely.

The stitches and drainage-tubes were removed on the ninth day. The wound closed gradually by granulation. There had been a crushing injury to the hand operated on in the dressing-room of the hospital on the Wednesday before this man's operation.

He was up every day and made no complaint until Thursday, June 16th. That night he was troubled with abdominal rigidity, and the condition was obscure. Food was withheld, and continuous saline enemas ordered. At the end of a couple of days he was given buttermilk and broths. His pulse and temperature remained about normal.

On Sunday, June 19th, he had some slight tremors or spasms.

On Monday morning he was having occasional spasms, which were accompanied by tremors, the sickly grin of the risus sardonius. We gave him a hypodermoclysis of two pints of normal salt solution with two drams of sulphate of magnesia into the abdomen; also 30 grains of chloretone by mouth every three hours. This did not seem to have any control upon the symptoms, so at

nine o'clock, June 21st, a lumbar puncture was made between the fourth and fifth lumbar vertebrae. About fifteen minims of the spinal fluid was allowed to dribble out through the aspirating-needle, and 10 c. c. of a twelve-and-one-half-per-cent solution of magnesium sulphate was injected. He was given a small hypodermic of morphine and atropine, and this seemed to have control of the patient until the night of June 22d, when another spinal puncture was made, and he was given 5 c. c. of a twenty-five-per-cent solution, which did not control the spasms and had to be repeated again that evening at 12 o'clock. Shortly afterwards the nurse reported that the patient was asleep and was completely relaxed.

He was unable to void his urine, the abdomen was hard, and there was an occasional elevation of temperature.

The spasms were controlled until 12 o'clock on the night of June 23d, when another 5 c. c. of a twenty-five-per-cent solution of magnesium sulphate was given, which lasted about ten hours, when another injection was made into the spinal canal.

At 9:15 on June 24th, another 5 c. c. of a twenty-five-per-cent solution was injected. After that the patient was delirious, the temperature rose to 101.8° , and the pulse to about 90. After a hypodermic of a grain of morphine the record-sheet shows he secured some sleep, although he was quite delirious for two or three hours.

On the afternoon of June 25th his temperature is recorded at 103° , and the pulse at 90. The spasms began to appear and be quite severe, when at 11:30 p. m. 10 c. c. of a twelve-and-one-half-per-cent solution were given.

On the morning of the 26th he was given, at about 7 a. m., 5 c. c. of a twenty-five-per-cent solution, which had to be repeated at 10:30, inasmuch as the spasms were not controlled by the injection. After that he slept fairly well, the temperature being around 100° , and the pulse around 90.

The next spinal injection which was received was given on June 27th, and three of those were recorded during the morning and afternoon. One was given at 10, another at 11:30, and another one about 3 o'clock in the morning.

At about 9:25 June 28th there was given 10 c. c. of a twelve-and-one-half-per-cent solution, which did not seem to control the spasms, and at 12 another injection was made, which relieved the spasms in about ten to fifteen minutes. From that time he rested well until June 30th, when,

at 9:45 in the morning, he was given another 10 c. c. of a twelve-and-one-half-per-cent solution which had to be repeated at 12 o'clock, and at two o'clock in the afternoon 5 c. c. of a twenty-five-per-cent solution were given. This produced sleep and rest, which continued until July 1st, when at 10 o'clock in the morning he was given 10 c. c. of a twelve-and-one-half-per-cent solution of magnesium sulphate.

This controlled the spasms until July 3d, when the history shows that at 9 o'clock in the evening another injection was given.

On July 4th the patient had a very uncomfortable day. The injection of magnesium sulphate had been given the day before, and a spinal injection was not made on the 4th, because he did not have any severe spasms, but he was very nervous, irritable, and uncomfortable, and the shooting of firecrackers annoyed him very much. The record shows he slept some during the night of July 4th.

On the morning of the 5th he was given 10 c. c. of a twelve-and-one-half-per-cent solution.

On July 6th he was delirious, his temperature was 102.2 degrees, and his pulse was 102. No spasms.

On July 8th he had a slight spasm, which commenced about 7 o'clock in the morning, and at 10 o'clock he had another severe spasm, so that 10 c. c. of a twelve-and-one-half-per-cent solution of magnesium sulphate were given.

From this time on the patient continued to improve. No spasms.

During his illness the patient could not void his urine. He partook freely of liquid nourishment, buttermilk, water, occasional drops of whisky, broth foods, milk, etc. The bowels were kept active by the aid of castor oil, and he relished large amounts of food.

During this time he developed a very bad bed-sore over the point of the sacrococcygeal region, which, by the time he left the hospital, July 28th had not healed.

He received 19,500 units of antitetanic serum. After the first injection the nurse was instructed to keep the patient's head elevated, so as to prevent the fluid from reaching the respiratory center.

Through the extensive studies of Meltzer, Auer, and others, we have learned that injections of magnesium salts produce anesthesia, accompanied by loss of reflexes, muscle tonus, and inhibition of the convulsions produced in tetanus. The effects are said to be paralysis of nerve-cells,

without preceding excitation, slight lowering of blood-pressure, and shallow respiration. The anesthetic dose, it was assumed, exercises an action of the nervous system, causing, for a period, sensory and motor depression, in that the nerve-cells of the cortex and centers in the medulla oblongata was affected.

Miller says:

"Of the value of the treatment of tetanus by magnesium sulphate suggested by Meltzer no one who witnessed the cases has any doubt. A patient in violent spasms and continuous opisthotonos was repeatedly reduced to complete and lasting relaxation in the course of a few minutes by an interspinal injection of magnesium sulphate. A result was thus achieved, surely, promptly and safely, which can be but weakly approximated by the usual sedatives, and even then after hours instead of minutes.

"Death in tetanus is said to be due in one-half of the cases to asthenia, produced by excessive muscular action, and inability to take food; and in most of the remaining cases, to asphyxia during convulsion. Inasmuch as we have in magnesium a means of blocking all motor impulses to the muscles, thereby preventing their action it seems reasonable to suppose that the system thus spared the enormous expenditure of energy incident to convulsions, may be able in some way to convert that energy into a means of protecting itself, and may possibly even be aided in the production of a specific antitoxin."

From Meltzer and Auer I quote:

"Intravenous injections of very minute quantities produce death in a few seconds by inhibition of the respiratory center. Life can be prolonged, and, if the dose be not large, maintained, by artificial respiration. In the meanwhile the animals are devoid of sensation and the power of motion, being apparently in a condition of profound coma. Applied to isolated nerve-trunks, a twenty-five-per-cent solution of magnesium sulphate produces a complete block of both sensory and motor impulses without antecedent irritation, as is produced, for instance, by lower concentrations of other salts.

"Injected subcutaneously, complete anesthesia and relaxation lasting two or three hours can be produced without impairment of the vital reflexes, the animals recovering completely. Large doses, however, produce death by inhibition of respiration. No cathartic effects are noticed. Intraspinal injection by lumbar puncture of .06 gram per kilo animal rapidly produces paraly-

sis, both sensory and motor, of the caudal extremities and then the sensorium causing apparently complete narcosis, which lasts for several hours; the animals finally recovering without symptoms. In monkeys, the injections were repeated several times without ill effect."

A moment's consideration of these results makes it evident that the magnesium salts, whether injected subcutaneously or directly into the circulation, or directly applied to the nerve-trunks or spinal cord, produce practically the same result, namely, an inhibition of nerve-impulses. Consequently, Meltzer concludes that their action is distinctly inhibitory, and also selective for nerve-tissues.

Death seems to be due, in all cases, to inhibition of the respiratory center. The blood-pressure is little diminished, even in lethal doses, and the heart continues acting after respiration ceases. In some experiments, slight convulsive movements, seemingly due to asphyxia, were noted just before death. As pointed out by Meltzer, a drug producing death by paralyzing respiration is much safer than one depressing the heart, inasmuch as respiration can be continued artificially. This was done in many of the experiments until the effects of the magnesium had passed away, probably through excretion.

When injected into the veins or subcutaneously, the drug is, of course, brought by means of the blood-stream in contact with the cells of all parts of the nervous system indifferently, and, consequently, the depressing effect upon the higher centers is more immediately pronounced

than when injected by lumbar puncture. When injected by lumbar puncture, the first effects appear in the lower extremities, and sensation and motion may be wholly or partially absent in them, while still retained in the trunk and upper extremities. Ordinarily, the paralysis of the lower extremities is followed by that of the upper extremities, but, if small amounts of the drug are used, it may be confined to portions of the lower extremities. These phenomena tend to prove a direct local action upon the nerves of the cauda equina, analogous to that of cocaine. The paralysis of the upper portions of the body is partly due to dissemination of the fluid upward along the cord, and is hastened by elevating the lower part of the spine, but is, no doubt, also due to absorption and diffusion by the blood-stream. In support of the latter hypothesis is the fact that the maximum depression of the respiratory and the cerebral centers is coincident, and may not occur until several hours after the injection, and also that if the drug is removed from the subdural space by puncture and washing, the general depressing effects can be wholly avoided. Furthermore, the effects of the drug pass away slowly and gradually, several hours elapsing before the animals are entirely free of symptoms, a period which might well correspond to that of elimination. In the experiments no after-effects were noted.

Having found that .06 gram per kilo was not dangerous in monkeys, he advised a dose equivalent to one-third in human beings, or, in other words, one cubic centimeter of a twenty-five-percent solution of magnesium sulphate to every twenty to twenty-five pounds of body-weight.

SEPTIC THROMBOSIS OF THE SIGMOID AND LATERAL SINUS, COMPLICATING CASE OF DOUBLE MASTOIDITIS*

REPORT OF A CAUSE OF DOUBLE ACUTE SUPPURATIVE OTITIS MEDIA, COMPLICATED BY MASTOID ABCESS ON ONE SIDE, FOLLOWED LATER BY MASTOID ABCESS AND SEPTIC SINUS THROMBOSIS ON THE OTHER SIDE. OPERATIONS REQUIRED: FIRST UPON ONE MASTOID, THEN UPON THE OTHER WITH RESECTION OF THE INTERNAL JUGULAR AND OPENING OF THE SINUS. COMPLETE RECOVERY.

By FRANK C. TODD, M. D.

Professor of Ophthalmology and Otolaryngology, University of Minnesota
MINNEAPOLIS

H. S., boy, aged nine years.

History: During an attack of measles, he had an attack of acute suppurative otitis media in

the right ear. After several days the drum membrane ruptured, and the patient was relieved and discharge continued from that time on. Two weeks later he suffered from earache in the left

*Read before the Hennepin County Medical Society, December 5, 1910.

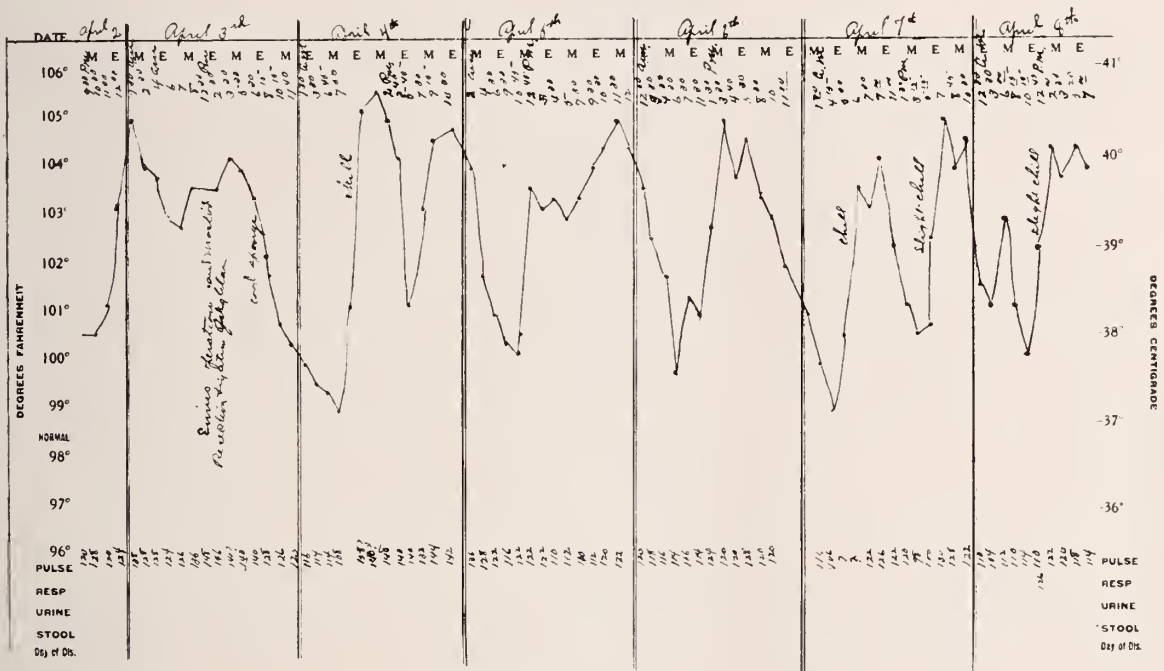
ear, and the drum membrane ruptured two days later (March 13, 1910).

He came to see me on this day. Examination showed discharge from both ears with pain on the left side, the side which was last attacked. There was tenderness over the left mastoid with a history of having had a fever, loss of appetite and depression.

The relief of pain on the right side for so long a period, the lessening discharge, and the absence of mastoid tenderness and other symptoms led me to believe that the mastoid on the right

The patient was at once relieved of his pain, and he felt better generally, though his temperature did not remain normal during convalescence, with the exception, however, of a temperature of 103° on the second and ninth days, his temperature kept well under 101° , and usually did not go much above 100° , so that we did not think from these symptoms alone that there was any more involvement of the mastoid on the other side.

He was allowed to leave the hospital on the twelfth day when his temperature had been normal for about two days, and he seemed in good



side was not abscessed. At any rate I did not consider that I was justified in opening it.

The symptoms were of confined pus, and pointed to a mastoid abscess on the left side. Accordingly, on March 14th, in the morning, at Hill Crest Hospital, I did a complete mastoid operation. The mastoid cells were found to contain much pus, which, upon examination, was proved to be caused by the streptococcus. The dura was not exposed during the operation, and the case was looked upon as a simple acute mastoid abscess without complication which had been operated on early. At the same time the drum membrane on the other side was freely opened in order that drainage might be improved on that side.

condition. After that he came to the office almost daily for dressings. Thus he left the hospital March 26th.

Another symptom, however, which persisted and increased, was that of torticollis, and a few days later he complained of headache. This headache became so severe at times as to keep him awake nights, and it increased in severity, despite the fact that the patient did not have high rises of temperature. He was irritable and his appetite poor.

On April 2d the mother telephoned me that the child had had a severe chill. He was accordingly immediately sent to the hospital where it

was found his temperature raised to 105° , and the next day dropped only to 102.6° . The sudden chill followed by the sudden rise of temperature, together with the persistence of the headache and other symptoms, led me to diagnose a septic sinus thrombosis. It was impossible to determine positively upon which side the septic sinus thrombosis existed, or whether or not it existed on both sides; but it was concluded to open the right mastoid and explore the right sinus because of the fact that the pain had been severe in the region of the lateral sinus and back of it on the right side, and because this mastoid had

gauze, and with sterile instruments and gloves the jugular vein was exposed in the neck and found to be nearly collapsed, the only blood entering it coming from the facial vein. The facial vein was tied off, and the jugular tied off above the facial and well below, and resected. The neck wound was then completely closed. Returning to the sigmoid sinus, it was opened well into the jugular bulb, and curetted out and then followed back nearly to the torcular before bleeding took place, the vessel being filled for this entire distance with pus and blood-clots. The outer wall of the sinus was removed, and the en-

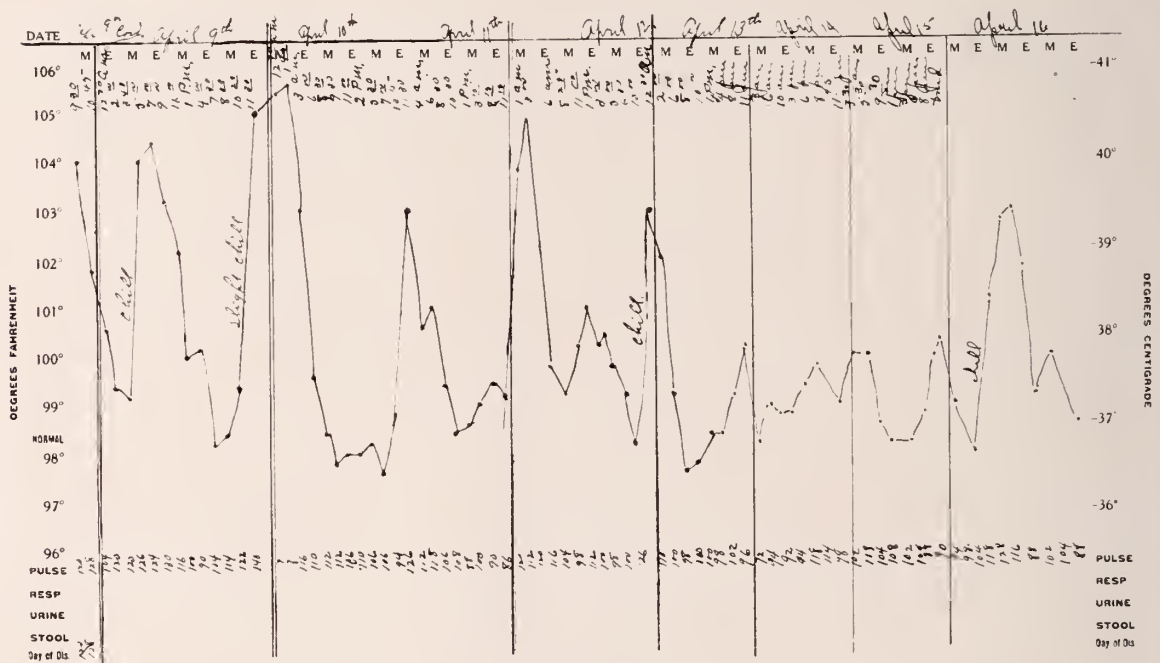


Chart No. 2

not been opened at all, while the other side had been thoroughly cleaned out and no complication found.

Accordingly on April 3d the mastoid on the right side was opened and found in fairly good condition. No bone destruction had taken place, and only a thin yellow secretion was present. The sigmoid sinus when exposed was found to be septic, so badly septic that the entire wall had necrosed. The sinus wall was yellow and could be scooped up with a curette. Within the vessel was found pus organized and completely filling the lumen of the vessel.

Without continuing further in this region, the wound was temporarily packed with sterile

tire area left exposed for drainage.

The next day the temperature dropped to 99° , to return again, following a chill, to 105.4° . The temperature-chart herewith shows the septic temperature, the sudden rises following a chill with the quite as sudden dropping of the temperature being characteristic.

It will be observed that this septic temperature kept up for twenty-five days after the operation, the extreme height of the temperature gradually decreasing, however, and normal temperature being more commonly present, so that on the 10th day after the operation the temperature dropped down to normal, and for four days did not go above 100° , when another chill came on followed

by a rise to 103° . On the 20th day again the temperature remained normal during the day and nearly normal for six days, and there were no chills after the thirteenth day after the operation. The urine test at all times was negative.

The child left the hospital on the thirty-fourth day after the operation, having had a normal temperature for four days, and thereafter was vis-

ited at the home or seen in the office, and did not again have a high rise of temperature nor a chill. The wound healed completely by the 55th day, both ears having ceased discharging. Twenty-five days after the operation when the patient was in good condition and running nearly a normal temperature with a good pulse and seemed to be progressing rapidly toward com-

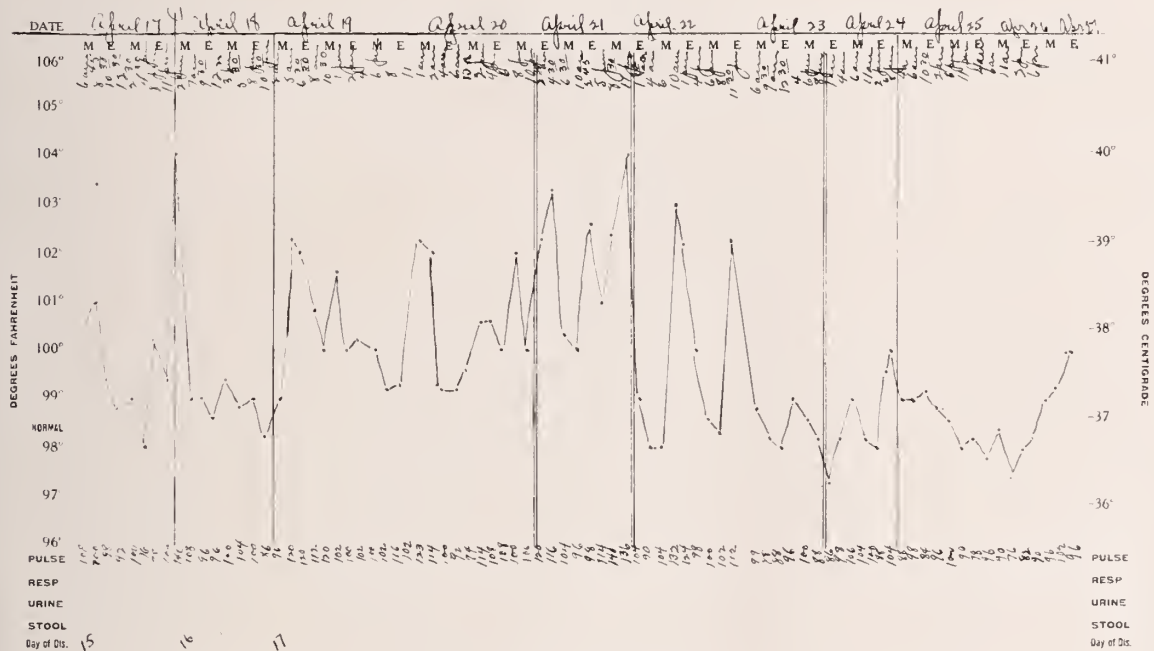


Chart No. 3

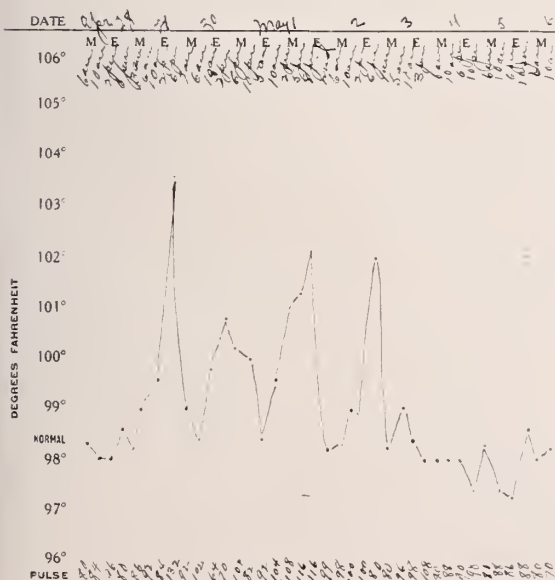


Chart No. 4

plete recovery, he developed diplopia, due to convergent strabismus. This made me fearful that a basilar meningitis was starting. This diplopia persisted for about two weeks, but completely subsided, as did all of the other symptoms, and recovery was complete.

COMMENTS

1 The infection was a severe one, due to the streptococcus.

2. Involvement of both sides made difficulties in diagnosis, and sinus trouble developed on the side which had supplicated for the longest period. It is possible that had a mastoid operation been performed earlier on the right side it might have prevented, later, the development of the sinus complication, but I believe the sinus became infected early, and even at the late date of opening the right mastoid no destruction of the cells had occurred. However, drainage through the drum-membrane when suppuration is profuse is

often inadequate, and more complete drainage could be secured in such cases through the mastoid process.

3. The persistence of the torticollis, with severe headache on the right side, was due to the septic condition of the sinus on that side and the blocking of the return flow of blood.

4. For a long time after the sinus operation the septic temperature persisted, but no secondary foci developed. During the time that the temperature was the highest, the pulse became very weak, indeed, so that the radial pulse could

not be felt. The patient was sometimes delirious and at times dropped into a stupor from which it was repeatedly expected he would not rally. We did not at any time administer anti-streptococcic serum though we had it under consideration. Had we used it we might have considered that recovery was due partially to its administration.

5. The radical operation for septic sinus thrombosis combined with resection of the jugular, is effective in curing these cases when operated early.

MECKEL'S DIVERTICULUM: A REPORT OF FIFTEEN CASES*

By DONALD BALFOUR, M. D.

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In the development of the human embryo the normal closure and obliteration of the intra-embryonic segment of the vitelline duct, which should occur about the fifth week, occasionally does not take place, and the duct exists as a structure of varying extent. The anomaly may be a complete tube connecting the part of the intestine to which it is attached and the umbilicus, thus forming an umbilical anus. More commonly only a portion of the duct remains, and this portion is in the form of a cylindrical tube attached to some part of the small bowel.

Although previous observers had recognized and described the condition, this diverticulum is particularly associated with the name of Meckel, for he was the first to direct attention to its importance as a cause of intestinal obstruction and other complications.

Between the two conditions, i. e., a complete tube from bowel to umbilicus and a free diverticulum, many variations are found. Very often a cord connects the apex of the diverticulum, with the umbilicus, which contains the remains of the umbilical vessels, or this cord may persist independently and find its own attachment to the umbilicus.

Meckel's diverticulum is usually about three inches in length. It is smaller than the intestine with which it is connected, is composed of the same coats, and it may be situated at any part of

the small bowel, from the pylorus to the cecum; however, it is usually found about two or three feet from the ileocecal orifice and almost always on the free surface, i. e., opposite the mesentery. As to the frequency of its occurrence, various observers give different figures, the average being about two per cent in autopsy cases.

The diverticulum by itself rarely causes any trouble, yet it is subject to the same pathologic processes as the vermiform appendix, and an acute inflammatory condition and perforation is always possible. Foreign bodies, varying from grape-seeds to a Murphy button, have been found lodged in its lumen. In the literature of intussusception several cases have been reported originating in Meckel's diverticulum which were either caused by the peristaltic activity of the diverticulum or were brought about by a stricture of the gut in the region of the diverticulum. A few cases have been reported where the diverticulum was the only structure in the sac of a strangulated inguinal hernia. Lastly, the diverticulum may cause obstruction by kinking the bowel, or by invaginating itself into the lumen of the bowel, so that one may appreciate the force of the statement that "A Meckel's diverticulum is more dangerous than the vermiform appendix." In the majority of instances, however, the danger in this congenital deformity is not from the diverticulum itself, but is due, rather, to a band which is usually present, reaching from the tip of the diverticulum to some other point in the abdominal cavity, usually the umbilicus. This

*Read before the Southern Minnesota Medical Association, December 6, 1910.

cord, or band, usually contains the remnants of the omphalo-mesenteric vessels in a varying degree of atrophy, and when present it is a very frequent cause of obstruction. Loops of intestine, usually the lower ileum, may become constricted by this band and set up an obstruction which rapidly becomes serious and often fatal unless relieved by surgical interference.

As regards the diagnosis of such a condition: It seems probable that one should be able to occasionally recognize the symptoms, and yet they are but rarely recognized. This may be owing either to the infrequency of the condition, or to the indefinite character of the symptoms, or to a combination of both reasons.

A history of previous attacks of obstruction coming suddenly and leaving suddenly, which would distinguish them from appendicitis or other inflammatory lesions, might be of some service. Fortunately, an absolute diagnosis is not necessary, as such an obstruction should call for immediate surgical interference.

In a review of 10,600 abdominal operations at St. Mary's Hospital (Mayo Clinic) during the past three years, I have collected fifteen cases of Meckel's diverticulum. This percentage is of no particular value because it is not an actual indication of how frequently the condition may have been present. Only in a comparatively few laparotomies is there any necessity for a systematic search for such an anomaly. For example, in the various stomach and gall-bladder operations in which sufficient evidence is found to explain the symptoms, there would be no reason to explore the intestinal tract inch by inch in search of further trouble. In many instances the condition has been discovered during the course of operations for other conditions, and when it had not caused any symptoms. For this reason I have classified the cases collected into two groups as follows:

Group 1. Those in which the diverticula were producing the symptoms from which the patient sought relief.

Group 2. Those in which the diverticula were removed to avoid possible future complications.

There are five cases in the first group, and on account of the varieties of the lesions it may be of interest to review, briefly, each case.

Case A 7,463.—Girl, aged 16 years, complained of cramping pain low in the right side of the abdomen, of rather short duration, with no fever or vomiting, but accompanied by subacute obstruction of the bowels; at times unable to obtain

a bowel movement for four or five days. The operation disclosed an acutely inflamed diverticulum of the ileum, some two feet above the ileocecal valve, which was producing a moderate degree of constriction by adhesions. The diverticulum was ligated, and the stump inverted, just as an appendix would be treated.

Case A, 18,552.—Married woman, aged 27 years, gave a history of having had since a child several attacks of low abdominal inflammation, more localized to the right side and associated with obstipation. She was confined to the bed from one to four weeks with the attacks. At operation a diverticulum from the ileum, about two feet above the ileocecal valve and extending to the umbilicus, was found. It was a little larger than a slate-pencil and about nine inches in length, and formed a loop through which the entire cecum and appendix had slipped, producing a chronic obstruction. The lumen of the diverticulum extended to the tip, and it was necessary to excise the umbilicus through a separate incision before the diverticulum could be removed.

Case A 20,686.—Male, aged 2 years, consulted on account of a discharging navel, which condition had been present for over a year; no fecal matter, but occasionally quite severe bleeding; no other symptoms. The child was given an anesthetic, and the umbilicus curetted and drained. The discharge persisted, however, and a few days later the abdomen was opened and a diverticulum found connecting the ileum and navel. The umbilicus and diverticulum were excised, and the opening in the abdominal wall closed as in umbilical hernia.

Case A 27,460.—Male, aged 5 years, was sent from a neighboring town with complete obstruction of the bowels. An emergency operation revealed a large diverticulum extending from the ileum to the umbilicus. After resecting the diverticulum it was found necessary to perform a lateral anastomosis between the loops of the ileum above and below the constricting point, in order to secure a free intestinal canal.

Case A 38,500.—Male, aged 57 years, gave a history suggesting a lesion in the gall-bladder, and was explored for that reason. The operation, however, disclosed an inflamed diverticulum three inches above the ileocecal orifice, causing an intussusception at the base. The diverticulum was removed, and the stump invaginated in the usual way.

The remaining ten cases fall into the second group, i. e., those which were not producing

symptoms sufficient to be complained of; yet, in a few of this number, the diverticulum showed active pathologic changes. For example, Case 45,454 had a diverticulum four inches in length closely adherent to the side wall of the ileum and having its origin eighteen inches from the ileocecal valve. The tip was inflamed and looked quite like an acute appendix. The patient, however, had no definite history of trouble which could be associated with such a condition, but came for consultation because of multinodular fibroids of the uterus, for which the operation was being performed.

The majority of cases in this series, however, were those of uncomplicated diverticula, varying in situation on the ileum, and were all treated by amputation and invagination.

This brief paper may serve to show that Meckel's diverticulum and its associated conditions should be borne in mind in obscure inflammatory processes of the lower abdomen; and especially in cases of supposed acute appendicitis where the appendix does not appear to be sufficiently involved to explain the symptoms, the ileum should be explored for a possible acutely diseased Meckel's diverticulum.

MEDICAL INSPECTION IN SCHOOLS*

By CHAS. H. KEENE, M. D.

Superintendent of Hygiene and Physical Training, Minneapolis City Schools

MINNEAPOLIS

In speaking of medical inspection I mean medical supervision rather than the mere inspection for contagious diseases. Contagious disease is a minor part of the work. If we exclude pediculosis, cities having medical inspection report only about 2 per cent of their school children as having contagious disease each year. We must work also for the other 98 per cent. This means the thorough physical examination of each child, and it also means keeping a close watch on the conditions in which the child lives, plays, and works while at school and even while at home. These conditions cause us to dip into the fields of hygiene, sanitation, and physical training, as well as into that of medicine.

Medical inspection in schools is not a new thing. In France, as far back as 1833, the law directed school boards to keep the school-houses clean, and in 1842 it was ordered that physicians visit the schools and inspect the children and the sanitation. Inspection was started in Brussels in 1874, and in Dresden and Leipsic in 1876. In Weisbaden a carefully thought out plan was instituted, which has since become the prevailing German method. This plan includes examination of eyes, ears, nose, throat, lungs, spine, heart, skin, and (in boys) for hernia. The results are made a part of the permanent record of the child, following him through school-life. The

height and weight are taken twice yearly, and whenever necessary another examination is made. A re-examination of all pupils is made in the third, fifth, and eighth years of school-life. Parents are notified of defects, and are expected to have them remedied. The school physicians do no treating.

Hungary started in 1887, Norway in 1889, Sweden in 1863, Roumania in 1899, and Russia in 1888. In 1908 England adopted its Medical Inspection Act, making such inspection a part of the compulsory duties of boards of education. Cairo, Egypt, has had medical inspection since 1882; Chili, since 1888. The Argentine Republic is said to have the most complete and efficient system in existence, even including free medical advice to the teachers. Japan began in 1898.

In the United States the first public school medical officer was probably in New York, in 1892. Boston, in 1894, started the first regular system of medical inspection, when the city was divided into fifty districts. New York made a real start in 1897, Chicago in 1895, and Philadelphia in 1898.

At present nine states have laws providing for general medical inspection, some going so far as to compel parents to have defective conditions remedied. In Minnesota four cities and towns have some form of medical inspection,—St. Paul, Winona, Eveleth, and Hibbing.

*Read before the Minnesota State Sanitary Conference, at Minneapolis, Oct. 4, 1910.

Every fall we assemble in the Minneapolis Public Schools about 40,000 children, the units of raw material on which we are to work and spend money. Would any sensible business man expect successfully to run his business without ever inspecting his working material as to its quality? What does experience in other places show to be the actual conditions, both as regards the amount of physical deterioration, and as regards its effects on the schools and on school progress?

In Great Britain examinations at Dundee showed that at least one-third of those examined suffered such defects of vision as to interfere with their power of receiving instruction under ordinary school methods. (Gorst.)

In Copenhagen 18 per cent of 3,141 boys are sickly on entering school. After two years of school-life the percentage of sickly was 30, and after puberty it was 40. Among 1,211 girls in the same schools the sickness was 12 per cent, which increased to 32 per cent in three years of school-life; and between 12 and 16 years the ill outnumbered the well by 10 per cent.

The Danish commission found that 29 per cent of the boys and 41 per cent of the girls were sickly. The Swedish commission found that the percentage of sickness rose from 5 per cent in the first school year to 36 per cent in the second, and to 40 per cent in the fourth.

In Germany one-fourth of the pupils are said to be below par, and nervousness increases from 10 per cent in the lower grades to 60 per cent in the upper. German army statistics show that of the young men who have passed the leaving examination, which is given on leaving the higher schools, and the passing of which lets them off with only one year's army service, only 21 per cent are found fit physically, while of those with an ordinary education 50 to 55 per cent pass. When the authorities came to an actual examination to find out who should be sent to the forest school at Charlottenburg, they found that there were some that the teachers recommended hoping to get a better scholastic result, and some that the school doctors considered in need of having their physical condition improved; and these two classes were found practically to coincide.

In the United States equally bad conditions were found. Fifteen thousand cases of preventable eye diseases were found in the New York schools in one year. In Philadelphia 10,000 were excluded from the schools during the year

because of contagious diseases. In the cities and towns of Massachusetts, outside of Boston, 20 per cent show defective vision, and in that state 27,000 have defective hearing. In this city there were 2,765 cases of contagious diseases among school children between December 15th and June 10th the last school year.

In 1908 there were over 11,000 deaths in the United States from scarlet fever, and 95 per cent of these children were under 15, that is, mostly school children. Dr. Durgin of Boston states that since school medical inspection was started in the schools there, scarlet fever has decreased five-sixths. Diphtheria costs 20,000 lives a year. Dr. Durgin also states that this has decreased two-thirds in the same time. Measles costs 9,000 and pertussis 10,000 lives a year. The rate per 100,000 is nearly equal to that for scarlet fever. I mention this merely to make a plea that physicians try to impress on parents that these diseases are not jokes, as many seem to think.

In cities where there is no medical inspection in schools the morbidity from these contagious diseases of children is greater during term-time than it is during the vacation, but where there is medical inspection the morbidity of term-time is cut down so much that these diseases are more common during the summer vacation.

School medical inspection, too, will find those early cases of tuberculosis which are possible of cure, and which are such prominent factors in the spread of this curse. Not only would they be found, but the improved sanitary conditions brought about by inspection would often prevent its inception, and the establishment of special schools for the tubercular would work many cures.

Again, we could diminish the amount of apparent stupidity and crime. Many a child credited, or rather discredited, with being stupid, bad, or a truant, is merely ill. He may have poor vision with more or less chronic headache; poor hearing, which makes him appear stupid; or he may have enlarged tonsils or adenoids with their resulting dulling effects. All these things retard the child in his school-work. Recent careful work in New York shows that hypertrophied tonsils and adenoids have a distinct bearing on retardation. This is shown by the fact that enlarged tonsils are found in 26 per cent of the dull children, and in only 12 per cent of the bright ones; while adenoids appear in 15 per cent of the dull and in only 6 per cent of the bright. A similar

condition is found in the cases of enlarged glands, defective breathing, defective teeth, etc. All these defects affect not only school standing, but after-life.

There are also the diet and vermin diseases, which medical inspection would check to a marked degree. These conditions are widespread, such diseases being common to the country, as well as to the city.

Physical defects have a close relation to crime, as well as to school-standing. Dr. Cronin reports one school in New York where there was a special class of 150 defectives. "This class was composed of backward, incorrigible, and truant children, and so-called impossibles. The physical examination showed 137 with enlarged tonsils or adenoids, or both, and 13 with defective vision. Written consent was readily obtained from parents to perform the necessary operations. On June 21, 1906, 81 children were operated on by three specialists at Mt. Sinai Hospital. Six months later 76 were re-examined, and without exception they had been promoted, and were doing well in their advanced grades."

Along with these things the amount of retardation in the schools will be diminished. Assuming that the normal child completes the eight grades in eight years, it takes the child with badly decayed teeth 8.5 years. If the children in this city are like those in New York and Massachusetts, about 6 per cent have such teeth. The child with defective breathing takes 8.6 years, and there are 14 per cent of these. If he has enlarged tonsils (25 per cent of them have), it will take him 8.7 years. With adenoids it takes 9.1 years, and 12 per cent have adenoids. In general, the handicap of disease, as shown by inspection, amounts to about 9 per cent. The Russell Sage Foundation people figure that the actual cost of this delay is approximately 6.2 per cent of the amount spent for schools. We in Minneapolis spend \$1,500,000 annually, and defectives (remediable defectives largely) cost us \$93,000 a year. A small part of this would give us a most excellent system of medical inspection, and the rest would give us kindergartens, playgrounds, and special schools for various kinds of defectives.

Recent work in Minneapolis schools shows that the relation of defects to retardation is most definite. Of the 114 examined in one school practically all were defective, and of these 49 had lost time by failing of promotion. The 49 had

lost 60.5 years. This is only a small group from one school, and I hesitate to estimate the loss in the whole city when we know that it costs \$30 and over to give a child a year's schooling.

Medical inspection has already gone far enough to show very close relation of school-room conditions to certain diseases. In Boston the School Hygiene Department tabulated the cases of anemia and nervous diseases, and compared this table with a table of the room temperatures. It was found that in those rooms having a temperature (average) of 65°—66° the amount of these diseases was less than one-half what it was in the rooms having a temperature of over 70°. In Chicago it has been found that in a building where there were open-air rooms, there were only 2 per cent of inflammations of the nose and throat in these rooms, whereas there were about 40 per cent of these things in the same building in rooms that were not open-air rooms.

As to the personnel of the corps and the method of work: The inspectors should be physicians of standing, specially trained for the work. They should have special training in hygiene and sanitation, in children's diseases, and enough knowledge of psychology, pedagogy, and nervous diseases to make them really valuable as advisors to the teachers in those cases where retardation is due to illness or to mental defect. This is a high standard, and in order to get these trained men cities must pay enough to attract them. Agencies, merely referring the cases with diagnoses to the parent, who takes the child for Inspectors should do no treating except in emergency treatment wherever he wishes.

As a necessity there goes with these inspectors a system of school nurses, to assist the inspectors in their work, and to give special advice to teachers, pupils, and parents: to follow up excluded cases; and to see that the recommendations of the inspectors are carried out. Nurses should be allowed, after obtaining the parents' consent, to treat cases of vermin and simple skin diseases. The presence of the nurse cuts down very markedly the number of necessary exclusions, thus making a great saving to the child by preventing absences.

The cost of inspection in such places as New York, Boston, and Seattle is 45 cents per child per year. The inspector can care for about 2,000, and the nurse for about 2,700. The pay of inspectors varies with the time required. Boston pays \$200 for about an hour a day; St. Louis

gives \$1,200 for the whole day. The pay of nurses ranges from \$50 to \$75 a month.

The actual working-plan is for the teachers each morning to pick out those suspected of contagious disease; and the nurse and physician see these immediately on their arrival. Those suffering from any contagious disease are at once excluded, and the parents notified on a blank provided for that purpose. If it is a disease for which the child or family is to be quarantined the Board of Health is notified by telephone. The next work is the thorough physical examination of the allotment of pupils for that day. When a child is found suffering from a physical defect, his parents are notified and are requested to take the child to their family physician or dentist for treatment. In the case of poor people, the nurse takes each child, after written request of the parent, to a free clinic. She follows up these cases in their homes and also those excluded ones who are not quarantined by the Board of Health, advising treatment for pediculosis, scabies, ringworm, etc., and giving needed advice on home hygiene and diet.

In addition to the inspection and care of the

children, the building should be thoroughly inspected at least once a week, to see that it is being properly cleaned, that the toilets are properly cleansed and supervised, and that the ventilating plant is doing its work.

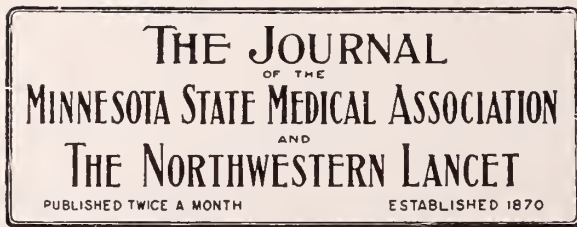
There is another forward step that we must take, namely, the annual physical examination of the teachers and janitors for communicable disease, especially tuberculosis. Teachers and janitors should not be appointed until they have passed a thorough physical examination as to the presence of communicable disease, and as to their physical ability to carry on the work expected of them.

All this is school-work and only school-work. "Education is preparation for life." We hear a great deal about conservation of natural resources on the one hand, and race suicide on the other; but is there any natural resource that can compare in value to the value of the child, on whom the very existence of this country depends; or is there any better way of preventing the destruction of the race than by preserving the health of the children that we already have?

TONSIL RESEARCH

Richard B. Faulkner, Pittsburg, Pa., advocates more conservatism in removal of the faucial tonsils. The tonsil is a natural organ, and should not be removed any more than any other natural organ. The mouth is an acoustic cavity, and if you alter the shape by removing the tonsils you will necessarily change the voice. The faucial tonsil is an important phonetic organ and has other important mechanical functions. Medical and philological research in regard to the tonsils is needed badly. The lymph current near the tonsils is less active than that of the pharynx at some distance, and there are lymphatic spaces

around the tonsil, and a system of closed canals in the follicles, which do not open into any near reticulum. The external deep surface of the tonsil is surrounded with a fibrous capsule. Exposure and disease change the structure of the tonsils: cell-infiltration and cicatricial tissue render absorption impossible. Blood and lymph vessels undergo compression and atrophy, rendering absorption less. The tonsils are not absorptive organs. Tonsil diseases are not fatal, but many patients die from tonsil operations. Diphtheria and other infections are less severe when they involve the tonsils and not the pharynx.—Medical Record.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

MARCH 1, 1911

THE UNIVERSITY DEFICIENCY BILL

The original deficiency bill prepared by the Board of Regents and the heads of various departments in the University called for an appropriation of \$636,442. The items included the deficiency in the University maintenance fund for the year ending July 31, 1911, amounting to \$130,000; increased cost of the engineering building, \$75,000; equipment of the same, \$40,000; equipment of the engineering laboratory, \$35,000; increased cost of the new Millard Hall, \$66,400; increased cost of the anatomy building, \$34,000; equipment of the new Millard Hall, \$75,000; equipment of the Elliot Memorial Hospital, \$54,000; maintenance of the Elliot Hospital to July 31, \$33,700.

The "shaving process" means a reduction of more than \$10,000 on the equipment of the Hospital. The other items are safe. Senator Frank Clague, chairman of the committee, constituted himself the watch dog of the treasury, and spent two days in consulting a pharmacist and a catalogue of a wholesale drug firm. The pharmacist told the senator that there was a discount of about 20 per cent from the list price. Acting on this valuable information, the committee shaved the bill 20 per cent on the equipment of Elliot Hospital. The original hospital

committee, who have had charge of the Elliot Hospital plans for the past two years and who have directed the management of all of the University Hospital buildings, construction and equipment, have spent weeks in estimating the necessary cost of maintenance and equipment, yet one man, who has no knowledge of the situation whatever, can overthrow the work of an experienced committee, and the only source of information that has reached the senator is by way of a pharmacist and a catalogue. Did it occur to the senate committee that the hospital committee would require bids for equipment and that any discount that any one could obtain would be extended to the hospital managers?

As usual, the doctors are scored. To show that the senate committee are further prejudiced, Senator A. T. Rockne caustically referred to the Elliot Hospital as "a monument to rich people," and said that he was tired of contributing State money for such purposes. He also said that "St. Paul gave the State a hospital, and we have spent a vast amount of money maintaining it, yet few people outside of the Twin Cities ever hear of it or its work." He was alluding to the Hospital for Deformed and Crippled Children. Did the senator ever take the trouble to investigate this last-named institution and to learn of the enormous amount of good done there? If he knows nothing about it, is that a sure sign that its work is unknown to others? This kind of talk from men who are supposed to occupy a high place in the State forces and to know the forces at work for the good of the people, shows a shocking lack of interest in what the State aids have accomplished.

Other members of the committee "expressed doubt whether the maintenance of a hospital is one of the functions of the University, and whether the institution is of any benefit to the State outside the Twin Cities."

We would respectfully suggest that the committee look over the report of the Carnegie Foundation Fund and compare that information with what other States have done for their universities. The time has come when the University of Minnesota must expect and solicit funds for building extensions, and the State must expect to pay for their equipment and maintenance, if it is to hold its place in the teaching world. Fortunately, a few senators understand the situation, and they are willing to aid, but the many who do not understand must gradually be educated until they can see the light.

THE INTERMINABLE REFORMER AND INVESTIGATOR

This season has brought to the earth's surface more than the usual number of reformers and investigators. The air is heavy with their efforts, and deep-breathing is almost impossible for the man who is attending strictly to his own business.

At any moment, at any place, one may expect to be reformed or investigated. If you are successful, beware, for your very success may demand a searchlight. If you are plodding along in a quiet, unobtrusive manner, trying to make both ends meet, look out, for you may be asked to explain why you are not doing better. If by chance you occupy a position of trust and you are over-working your body and brain to conscientiously carry out the spirit and the letter of your office, you may be called upon to show cause why you should not be ousted.

For the same reason that has always existed there are men and women who delight in reforming and investigating others before they themselves are competent to pass upon the simpler problems of cause and effect.

The so-called board of "friendly visitors" are usually responsible for more trouble and confusion than can be allayed in months or years, even when their findings are based upon careless observations, immature judgment, and erroneous conclusions, and have been denounced as incorrect by competent experts. Why is it necessary for boards of investigation to be composed of ignorant self-satisfied fanatics?

A short-haired woman, an untrained preacher, and a man of ample means who finds time hanging heavily on his hands, usually constitute a board of investigation. The results of their findings make thinking men grind their teeth in rage and almost weep for an opportunity to give this incongruous committee a few simple lessons in right living and right thinking.

Friendly visitors do not always confine their investigations to institutions they know nothing about, but they invade the homes of the poor, and intrude upon privacy, insult home traditions, and leave a trail of anger and rebellion behind them. Yet they strut about in their peacock finery and think they have been created the personification of righteousness. After a few years of self-glorified parading, a little information sifts into their befogged brains, and they begin to reason, and suddenly they are aware of the fact that they have been fools for years. A period

of humiliation follows, and if they are made of the right material their education begins, and they may accomplish something. Unfortunately, many of these reformers never wake up and the farce goes on.

To pick up the morning papers and find that no new investigating committee had been appointed over night would be a shock to the average reader. One often wonders how the legislature can accomplish any good work, as the majority of that body seems to be made up of committees of investigation.

Committees to the "right of them;" committees to the "left of them;" committees in front and behind them, "volleyed and thundered!" Well, if they continue to volley and thunder, let them, for no power on earth can prevent it, and we must accept their vaporings, even though it is amusing, disconcerting, discouraging, destructive to business, destructive to morals, and leaves us without a leg of support. The joys of the investigator must be preserved in spite of the fact that the majority of investigators and reformers need investigating and reforming rather than the unfortunate who happens to be in their pathway.

For the love of peace and good citizenship, will some one kindly appoint some one who knows something when an investigation or reform is actually needed? Kindly also permit us to go about our legitimate business without interruption and with the understanding that most people are trying to conduct themselves sanely.

"MEDICAL CHAOS AND CRIME"

In our issue of Feb. 1st we reviewed a book under the above title. We are not greatly alarmed over the sporadic abuses in the medical profession, of which this book largely treats, but every thoughtful physician may well take alarm at conditions now existing in the profession, of which this book is a symptom, and especially over the changing attitude of the public toward the profession, whether that attitude is one of justice or injustice. No man, at least in America, can afford to ignore public opinion, even for his own sake; and he certainly should not do so when such opinion may become exceedingly dangerous to the public itself.

As never before, the medical profession is today ridiculed, maligned, and misrepresented. For the abuses of a few, the whole profession is held responsible. If one physician, by good business management, accumulates a moderate

competency all physicians are called grafters, and this is probably due to the fact that so many die poor and in debt, the conclusion of the public seeming to be that the physician has imposed upon him the duty of dying a pauper.

When physicians began to express a lack of confidence in many of the drugs they had long prescribed, the public became suspicious of all drugs, and the non-drug giving faddists had their day, which they celebrated with a noise and illumination worthy an old-fashioned Fourth of July, abusing the "regulars" as if they were the Johnny Bulls of Independence day.

When the profession sought, by organization, to purge itself of abuses and to advance public interests by the combined force of "50,000" practitioners, they became a "medical trust," and the "League of Medical Freedom" sprang up with a motley crew of hangers-on, who, if they did nothing else, furnished some of the billingsgate with which to greet the physician who has kept "late hours," and is "driving home in mud and rain in the bright morning hours, having left behind a home alight with the joy of a child born into the world, or a fever crisis turned toward life."

And this new book on "Medical Chaos and Crime," now attracting wide attention and being received almost as a divine revelation by unthinking men and women, will be made another obstacle in the way of men who recognize the fact that abuses exist wherever men exist, and that co-operation on the part of leaders, made such by heart and brains, is very essential if abuses are to be curbed and held to a minimum in number and effectiveness.

We plead for a recognition of the conditions confronting the profession that the forces of the great and righteous majority may not be overcome by the "pernicious activity" of the small minority. Purity may and should exist in the unit, but this is not enough, for power exists only in the mass.

Will the medical profession meet the conditions of the day, which verge closely upon a crisis, and which "Medical Chaos and Crime," either as a book or as a condition, may precipitate?

BOOK NOTICES

DUODENAL ULCER. By B. G. A. Moynihan, M. S. (London) F. R. C. S., Senior Assistant Surgeon at Leeds General Infirmary, England. Octavo of 379 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$4.00 net; half morocco, \$5.50 net.

Very little need be said of this book because it is such an excellent work. It is a monograph by an authority on a subject, that is Greek to most physicians. There is probably no subject upon which there exists more dense ignorance than that of duodenal ulcer.

The author takes up, first, the rarer forms of ulcers, such as those caused by burns, by uremia, by tuberculosis, and those of the new born.

The last part of the book consists of a detailed statement of all cases operated upon.

The subject of chronic duodenal ulcers is thoroughly treated in the two hundred pages of the body of the book, and these pages are full of meat for the man who wishes real knowledge on the subject.

The book is well printed on good paper, and the illustrations are very good. This monograph is a valuable addition to our knowledge of diseases of the upper abdomen, and should be in the library of every physician who is called upon to diagnose diseases of the upper abdomen.

HOOKEWORM DISEASE. Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, and Treatment. By George Dock, A. M., M. D., Professor of the Theory and Practice of Medicine, Medical Department Tulane University of Louisiana, New Orleans, and Charles C. Bass, M. D., Instructor of Clinical Microscopy and Clinical Medicine, Medical Department Tulane University of Louisiana, New Orleans. 250 pages, royal octavo. Fifty illustrations, including one colored plate. Price, \$2.50. C. V. Mosby Company, St. Louis.

No diseases are more interesting, and none have received more careful and scientific work, than the various tropical diseases. This work of Dock and Bass takes up one of the most interesting of these and from an economical point of view is one of the most important. Hookworm disease, in all probability, is the chief

cause of the so-called tropical anemia, which has been looked upon as due to climatic conditions rather than disease-factors in the usual sense. But, like the others, this disease can be traced to a definite cause, and proper treatment instigated.

Besides the uncinaria, which is the actual cause of the disease, moisture, sandy soil, and shade seem to be factors in its spread, by aiding in the propagation of the hookworms.

Besides the careful and complete consideration of the zoölogic features and pathology, the book takes up in detail the treatment of this disease, both as to prophylaxis and during the various stages.

The method of administering the specific (thymol) when the hookworms are in the intestines, together with the results to be expected and the constitutional treatment after the disease is cured, are all gone into with precision and thoroughness.

PRACTICAL MEDICINE SERIES. Nervous and Mental Diseases. Volume 10, 1910. Edited by H. T. Patrick and Peter Bassoe. Year Book Publishers, Chicago.

In the two hundred and forty-eight pages of this volume is included a very good review of the current literature on nervous and mental diseases. Nearly all of the work of the year is given mention, and the most important contributions receive detailed consideration. In many instances figures and cuts have been reproduced from the original articles. Among different subjects noticed the following are especially timely: psycho-analysis, cerebral localization, tumors of the spinal cord, anterior poliomyelitis, the treatment of trifacial neuralgia by alcohol injections, and the treatment of cervical ribs.

The whole volume gives one a very good understanding of the year's progress in nervous and mental diseases.

MEDICAL ELECTRICITY AND ROENTGEN RAYS, WITH CHAPTERS ON PHOTOTHERAPY AND RADIUM. By Sinclair Tousey. 750 illustrations and 16 in color. Pp. 1116. Philadelphia and London: W. B. Saunders & Co., 1910.

Though it may be, as the author states, "impossible for any book on electricity to be up to date," it is certain that this one is complete at the time of writing. It contains a full theoretical exposition of the various forms of electricity, and afterwards a careful statement of the practical

uses of each. The different forms of apparatus are described in detail, so that a beginner will find all necessary instruction for making use of each current. Thus, in the part devoted to the static machine, in addition to a full text, numerous figures make clear the details of the work of the machine and the application of the current. Electricity in the diseases of the nervous system has 76 pages, and in this is included a short account of electric sleep and electric death.

The chapter on electrodiagnosis and on the prognosis based on electrodiagnosis is very good.

High-frequency currents are considered in their relation to special diseases, and phototherapy also receives a short chapter.

The parts devoted to the x-ray are particularly full, and scarcely any phase of the subject, as regards either diagnosis or treatment, is neglected. The matter of making radiographs is considered in great detail. The book closes with a chapter on radium and a very complete index.

The mechanical parts of the book are very well done.

The harshest criticism that can be offered is that the author applies his methods to a great variety of diseases and in his enthusiasm has claimed results from treatment where it seems scarcely possible that any benefit could have been had.

PROGRESSIVE MEDICINE. A Quarterly Digest of the Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart A. Hare. Lea & Febiger, Philadelphia and New York. Dec., 1910.

This volume deals with diseases of the digestive tract, genito-urinary diseases, surgery of the extremities, and therapeutics.

The aim of the authors has been to bring a review of the latest literature on the subjects named before the general practitioner. It takes up the literature bearing upon the special organs of the digestive tract, and reviews the same thoroughly.

The chapter on diseases of the stomach is especially worthy of consideration. Fleckseder, on the subject of achylia gastrica, proposes a new classification, which covers the various etiological factors of the disease, and is a classification which should be generally recognized.

The chapter on surgery is meager as to detail, giving, however, a synopsis of the literature on its more recent achievements.

The subject of therapeutics, by Landis, is treated in an interesting and educational manner.

The editors of the book are to be congratulated on being able to put so much valuable knowledge before the student of medicine.

INTERNATIONAL CLINICS. Vols. I to III. 20th Series, 1910. J. B. Lippincott Co., Philadelphia and London.

It may be doubted whether the International Clinics have not outgrown their special field of "Illustrated Clinical Lectures" and invaded the field of the regular journals. They are, however, usually well worthy of perusal, and the present volumes are no exception to the rule.

The clinics consist of a series of special articles in each department of medicine, together with a brief résumé of the progress of medicine during the previous year.

Especially timely and valuable is the symposium on the serum diagnosis of syphilis, with which the first volume opens. While the actual performance of the Wasserman test should be entrusted to specially trained laboratory workers, it is important for the physician to understand its underlying principles, and its uses and limitations. H. Gideon Wells contributes a résumé of the recent work in purin metabolism, including his own not insignificant researches.

Other articles worthy of note are, "The Tuberculins," by J. B. Nichols; "Eye-Strain Among School Children," by Aaron Brav; "Persistent Hemorrhage from the Arteries," by Brook Anspach; "Gastro-intestinal Hormones," by Sidney R. Miller.

J. C. Bloodgood, of Baltimore, in his review of the progress of surgery, devotes rather too much space to his own work and his own opinions.

The illustrations throughout, while few, are excellent and elucidate the text.

The International Clinics are of value to the practitioner who desires a general knowledge of the progress of medical science.

REPORTS OF SOCIETIES

HENNEPIN COUNTY SOCIETY

The annual meeting of the Society was held on January 9th, with seventy-two members present.

The report of the treasurer showed receipts of \$3,318.77, including a balance from last year of \$640.95. The expenditures were practically equal to the annual receipts.

The executive committee reported the assistance given to and proposed for an unfortunate member.

The Board of Trustees reported on the increased value and use of the library of the Society.

The Milk Commission gave an encouraging report on its work. Much has been done to create public opinion, and many producers of milk have improved the conditions of their dairies to such an extent that much high-grade milk is received in the city.

"No report" was made by a half dozen committees, and the Society must believe that "no news is good news."

Dr. E. G. Gross was received as a member upon his transfer-card.

The retiring president, Dr. C. A. Donaldson, gave the annual presidential address, his subject being "Progressive Therapeutic Standards."

Officers were elected as follows:

President, Dr. T. F. Quinby; first vice-president, Dr. H. E. Cary; second vice-president, Dr. W. G. Sheldon; executive committee, Dr. H. P. Sweetser and Dr. C. A. Donaldson; board of censors, Dr. W. E. Rochford and Dr. A. N. Bessen; board of trustees, Dr. J. T. Moore and Dr. H. L. Staples; delegates, Dr. W. A. Jones, Dr. J. G. Cross, Dr. L. A. Nippert, and Dr. G. P. Crume; alternates, Dr. H. H. Leavitt, Dr. C. D. Harrington, Dr. A. S. Hamilton, and Dr. Oriana McDaniel.

FEBRUARY MEETING

A stated meeting of the Society was held on February 6th, with Dr. T. F. Quinby in the chair and forty-six members present.

Dr. S. E. Sweitzer presented a case of small group papular syphilide. This patient had been given 6-10th of a gram of salvarsan, and the eruption disappeared in four days. It was, however, too early to determine final results.

In the absence of the Chairman of the Executive Committee the Secretary reported as follows:

It is brought to the attention of the Executive Committee that we have a great deal of illegal practice in the city, some of which is of more or less vicious nature. One case especially is a

man who has been in the city a year or two and who is running the Russell Sanitarium at the corner of Hennepin and 31st street.

We recommend that a committee of five be appointed by the chair to take up the matter of irregular practitioners in the county. The committee is also to be empowered to employ an attorney and to expend not more than \$100 for the year 1911; this committee to also act with the Vice Commission in investigating quack medical advertisements.

Recommended that dues be fixed at \$8.00 for the year 1911, \$3.00 of which shall be dues to the State Association.

The matter of a new building for physicians was taken up, and it was voted to call a special meeting of the Society for Monday evening, Feb. 20th, to consider the subject.

Dr. C. C. Pratt was admitted on his transfer card.

Papers were read as follows: "The Grossich Method of Skin Sterilization," by Dr. E. C. Robishek; and "Umbilical Hernia," by Dr. Wm. M. Chowning. Both papers were discussed at length.

A committee was appointed to attend the funeral of Dr. J. C. Cockburn.

C. H. BRADLEY, M. D., Secretary.

RICE COUNTY SOCIETY

The Society met at Northfield on January 28th, with twelve members present. Two papers were read as follows: "Non-tubercular Joint Affection," by Dr. Arthur J. Gillette, of St. Paul; and "Report of the Clinical Congress of Surgeons," by Dr. J. S. Seeley, of Faribault.

The following officers were elected:

President, Dr. Arthur C. Rogers, Faribault; first vice-president, Dr. Warren Wilson, Northfield; second vice-president, Dr. W. H. Rumpf, Faribault; secretary-treasurer, Dr. Frederick U. Davis, Faribault; censor, Dr. Warren Wilson, Northfield; delegate, Dr. D. M. Strang, Northfield; alternate, Dr. I. F. Seeley, Northfield.

The Society was entertained by the physicians of Northfield.

FREDERICK U. DAVIS, M. D., Secretary.

UPPER MISSISSIPPI SOCIETY

The Society met at Little Falls on January 17th with twenty-three members and three visitors present.

Dr. W. A. Jones, of Minneapolis, gave a clinic

in nervous diseases, patients being furnished by the local physicians. The clinic was greatly enjoyed and appreciated by the medical men.

The following officers were elected for 1911: President, Dr. Paul E. Kenyon, Wadena; vice-president, Dr. M. A. Desmond, Akeley; secretary, Dr. G. H. Lowthian, Akeley; treasurer, Dr. Wm. Reid, Deerwood; censor, Dr. F. H. Knickerbocker, Staples; delegate, Dr. W. Courtney, Brainerd.

Place of next meeting, Brainerd.

G. H. LOWTHIAN, M. D., Secretary.

NICOLLET-LE SUEUR COUNTY SOCIETY

The Society met at Le Sueur on January 17th, with seven members present.

The following papers were read: "The Management of the Puerperium," by Dr. H. A. Hartung, Le Sueur; "Notes on the Treatment of Obstetric Hemorrhages," Dr. J. E. LeClerc, Le Sueur, Minn.

The following were elected officers for the current year:

President, Dr. H. D. Valin, St. Peter; vice-president, Dr. D. W. McDougald; secretary, Dr. J. E. LeClerc, Le Sueur; treasurer, Dr. J. W. Daniels, St. Peter; censor, Dr. F. P. Strathern, St. Peter; delegate, Dr. D. W. McDougald, Le Sueur; alternate, Dr. H. A. Tomlinson, St. Peter.

J. E. LECLERC, M. D., Secretary.

CLAY-BECKER COUNTY SOCIETY

The Society met at Detroit on January 30th, with twelve members present.

Papers were read as follows:

"Some Aspects of Gall-Stone Surgery," by Dr. A. T. Mann, Minneapolis; "Diabetes," by Dr. L. G. Weeks, Detroit; "The Medical Profession," by Dr. C. O. Estrem, Detroit; "President's Address," by Dr. O. J. Hagen, Moorhead.

Officers were elected as follows:

President, Dr. L. M. Lowe, Glyndon; vice-president, Dr. J. E. Carman, Detroit; secretary-treasurer, Dr. E. R. Barton, Frazee; censor (three years), Dr. W. H. Aborn, Dilworth; delegate (two years), Dr. F. H. Alexander, Barnesville; alternate (two years), Dr. L. C. Weeks, Detroit.

The next meeting will be held at Moorhead on April 24th.

E. R. BARTON, M. D., Secretary.

NEWS ITEMS

The St. Peter State Hospital wants a junior assistant physician, as stated in the notice below.

Dr. Mary P. Hopkins, of White Bear, is serving her second term as health officer of that place.

The new hospital building at Marshall is nearing completion. The heating plant was put in last month.

Dr. A. C. Biddle, of Lewiston, Mont., was married last month to Miss Bess Allen, of Athens, Ohio.

Dr. A. G. Tollington, of Clearwater, died last month. Dr. Tollington had practiced at that place about twelve years.

Dr. Paul B. Cook, of St. Paul, has been appointed assistant to Dr. Howard Lankester, health commissioner of the city.

The physicians of Bowman, Scranton, Rhame, and Marmarth, towns in the southwestern part of North Dakota, have organized a medical society.

Dr. Harry G. Wood has sold his practice at Blooming Prairie to Dr. J. W. Warren, and has gone to Montreal to do post-graduate work at McGill.

Dr. J. B. Eagan has moved from Woonsocket, S. D., to Dell Rapids, S. D. He will be associated with Dr. W. W. Grove, of the latter place.

The Samaritan Hospital of Aberdeen, S. D., has been turned over to the Baptists by the county commissioners. They will conduct a general hospital.

The Presbyterians of South Dakota will build a \$75,000 hospital at some point in the Black Hills. Rapid City, Tallman, Hot Springs, and Sturgis are after it.

A chiropractic has been arrested at Sault Ste. Marie, Mich., for practicing without a license, and the Michigan State Board of Registration proposes to carry the case to the supreme court as a test-case.

A delegation of homeopathic physicians and laymen recently appeared before a committee of the Minnesota legislature asking for the re-instatement of the homeopathic department of the school of medicine in the State University.

Dr. Harry D. Earl, of Cherokee, Iowa, has been appointed assistant physician in the North Dakota Hospital for Insane at Jamestown. Dr. H. W. Miller, whom he succeeds, will do post-graduate work in Europe.

The Wisconsin senate has before it a bill requiring medical examination of applicants for marriage certificates in the state. Little attention will perhaps be paid to the bill, but its presence is a pointer not to be ignored.

The South Dakota legislature is considering a bill that imposes a license of \$500 upon itinerant physicians. The only objection to the bill came from representatives who thought the "Quaker" or "United" doctors more necessary than "regulars."

It is reported that Dr. G. A. Abbott of the chemistry department of the University of North Dakota has succeeded in demonstrating that snuff is drugged with cocaine, which probably accounts for its very extensive and growing use.

The Seventh District Medical Society of South Dakota met at Sioux Falls, S. D., last month. Dr. Anna H. Hainer read a paper on "Hysterical Manipulation," and Dr. F. J. Billion presented one on "The Use of Carbonic Acid Dioxide Snow in Dermatology, with Demonstration."

Dr. H. J. Awty, of Moorhead, has begun a libel suit against the *Crookston Times* for charges made against him in connection with his care of an injured brakeman. The charges had no reference to Dr. Awty as a surgeon, but referred to the matter of his taking evidence from the man concerning the manner of his injury.

Dr. T. C. Clarke, of Stillwater, who has been county physician for Washington County for the last twenty years, is now associated with the White Bear Hospital and Sanitarium at St. Paul's handsome lake resort, White Bear; and hereafter all county patients from the part of Washington County next to White Bear will be sent to the Sanitarium.

The Sixth District Medical Society of North Dakota met at Bismarck last month, Dr. L. A. Schipper, of Bismarck, presiding. The attendance was unusually large, and several excellent papers were read. A resolution was passed favoring the sterilization of hopeless degenerates and habitual criminals confined in the state institutions. A bill to this effect is before the legislature of that state.

The White Bear Hospital and Sanitarium surgical and medical staff: Surgery, Drs. H. P. Ritchie and F. J. Savage, of St. Paul, with Dr. A. MacLaren, of St. Paul, as consultant; medicine, Drs. T. C. Clark, of Stillwater, and J. A. Poirier, of Forest Lake, with Dr. E. J. Abbott, of St. Paul, as consultant; pediatrics, Dr. Walter Ramsey, of St. Paul; eye, ear, nose, and throat, Dr. Henry Beaudoux, of St. Paul. Dr. Mary P. Hopkins is the resident physician.

The North Dakota legislature has a bill before it to recognize the practice of "naturopathy." As defined by the bill, naturopathy means any form of treatment, adjustment, or any means whatever intended for the relief or cure of human ailments by any other means than drugs, medicine, or surgery. We quote from a daily paper, and therefore may do the naturopaths or naturopathy an injury or hurt which cannot be healed by "drugs, medicine, or surgery."

ASSISTANT WANTED

An assistant with one year's hospital experience is wanted by a firm of physicians in a city of 10,000 in Southern Minnesota. A salary will be paid the first year. This is a splendid opportunity to learn surgery. A Swede or German is preferred. Address C. J. R., care of this office.

PRACTICE FOR SALE

A \$4,000 practice in a farming town of 300, eighty miles southeast of the Twin Cities; Scandinavian preferred. Have for sale a driving outfit, and drugs and fixtures invoicing about \$800; only doctor. Want a good, reliable man to succeed me; am moving to city. Address S. L., care of this office.

SCANDINAVIAN PHYSICIAN WANTED

A good, well-recommended Scandinavian physician and surgeon, who can conduct a drug-store, is wanted to locate at Audubon, Minn., at once. Splendid opportunity. For further particulars address, G. C. Skeim. Secretary Improvement League, Audubon, Minn.

OFFICE FOR RENT

A good down-town Minneapolis office for dentist or physician at 412 Reid Corners (9th and Nicollet). Everything is new and up to date. Inquire at above place.

OFFICE POSITION WANTED

An energetic lady of ability would like a position in a doctor's or dentist's office. Satisfactory references given. Address T. S. Tel. Grove 1292, Minneapolis.

ASSISTANT WANTED AT ST. PETER STATE HOSPITAL

Wanted: Junior Assistant; single; general hospital experience. Excellent opportunity for training in general medicine and pathology. Maximum salary \$1,000 a year, with board, lodging, and laundry. Opportunity for promotion. Address Dr. H. A. Tomlinson, Supt., St. Peter, Minn.

NEBULIZER FOR SALE

A high-grade nebulizer made by Wm. Boeckel & Co., of Philadelphia, and in perfect condition, is offered for sale very cheap. Outfit consists of large pump-tank, three bottles and stand for same. Price, \$20. Address or call upon F. H. Newton, 4405 Upton Ave., Minneapolis.

Doctor: If you want practical post-graduate work Post-graduate Medical Dept., Tulane University of La. during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797,

DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF
MINNESOTA FOR THE MONTH OF DECEMBER, 1910

REPORTED FROM STATE INSTITUTIONS FOR MONTH OF DECEMBER, 1910.

	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio-myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (1)	Fuereptal Septicaemia
Fergus Falls, Hospital for Insane.....	7	2													
Rochester, Hospital for Insane	15		1			2									
St. Peter, Hospital for Insane	10	4												1	
Anoka, Asylum															
Hastings, Asylum	2		1												
Faribault, School for Deaf															
Faribault, School for Blind															
Faribault, School for Feeble Minded	6	1		1										1	
Owatonna, School for Dependents															
Stillwater, State Prison	1	1													
St. Cloud, State Reformatory															
Red Wing, State Training School															
Minneapolis, Soldiers' Home	10		1												
Totals.....	51	8	3	1	....	2	....	....	....	....	....	....	....	2	....

MONTH OF DECEMBER, 1910.

CITIES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polio- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (1)	Puerperal Septicaemia
Albert Lea	4,500	5,657	3			1											
Anoka	3,769	4,053	4	1													
Austin	5,474	6,489	9		1	1						1					
Barnesville	1,326	1,566	1														
Bemidji	2,183	3,800	7			3								1			
Blue Earth	2,900	2,364	4	1		1											
Brainerd	7,524	8,134	12			5		2						2			
Chaska	2,165	2,085	7	1													
Cloquet	3,074	6,117	5				1										
Crookston	5,359	6,794	7	1		1											
Detroit	2,060	2,149	0						1								
Duluth	52,968	64,942	107	7	1	16	1	5	1			2		8	3	4	1
East Grand Forks	2,077	2,489	3													1	
Ely	3,712	4,045	3	1		1											
Eveleth	2,752	5,332	4		1									1		1	
Faribault	7,868	8,279	7			1									1	1	
Fairmont	3,440	2,955	4			1										1	
Fergus Falls	6,072	6,692	10	2		1							1	1		2	
Granite Falls	1,214	1,340	1	1													
Hastings	3,811	3,810	3													1	
Hutchinson	2,495	2,489	0														
Jordan	1,270	1,311	2														
Lake City	2,744	2,877	1														
Litchfield	2,280	2,415	11	1	1	1										2	
Little Falls	5,774	5,856	4			1											
Luverne	2,223	2,272	2														
Le Sueur	1,937	1,842	2			1										1	
Madison	1,336	1,604	1														
Mankato	10,559	10,996	12			2	1										1
Marshall	2,088	2,243	4	1				1									
Melrose	1,768	2,151	3														
Minneapolis	202,718	261,974	311	24	7	58	3	18	3				1	2	11	21	1
Montgomery	979	1,281	2			1											
Montevideo	2,146	2,595	3			2											
Moorhead	3,730	4,794	5													1	
Morris	1,934	2,003	1														
New Prague	1,228	1,419	*														
New Ulm	5,403	5,720	5			1											
Northfield	3,210	3,438	6														
Ortonville	1,247	1,612	0														
Owatonna	5,561	5,651	5	1											1	1	
Pipestone	2,536	2,885	2														
Red Lake Falls	1,885	1,797	1														
Red Wing	7,525	8,149	14	2	1	3											
Redwood Falls	1,661	1,806	3			1			1								
Rochester	6,843	7,233	30	1	2	6										4	
Rushford	1,100	1,133	2													1	
St. Charles	1,304	1,238	2														
St. Cloud	8,663	9,422	18	1		8								1	1	1	
St. James	2,607	2,320	6		1			2									
St. Paul	163,632	197,323	210	16	2	24	3	9	3	1				3	9	18	
St. Peter	4,302	4,514	4			1											
Sauk Centre	2,220	2,463	6		1	1										1	
Shakopee	2,046	2,069	4													1	
Sleepy Eye	2,046	2,312	4														
South St. Paul	2,322	3,458	6	2		1											
Stillwater	12,318	12,435	12	3		2										1	
Thief River Falls	1,819	3,502	9	3		1							1	2			
Tower	1,366	1,340	2													1	
Tracy	1,911	2,015	0														
Virginia	2,962	6,056	15			2				1		1		1			
Wabasha	2,528	2,619	3														
Warren	1,276	1,640	3			1											
Waseca	3,103	2,838	5			1								1			
Waterville	1,260	1,383	3														
West St. Paul	1,830	2,100	1			1											
Willmar	3,409	4,040	1			1											
Windom	1,944	1,884	3	1												1	
Winona	19,714	20,334	25	2		5	2	1						1		1	
Worthington	2,386	2,276	1			1											

REPORTED FROM 65 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS
FOR THE MONTH OF DECEMBER, 1910.

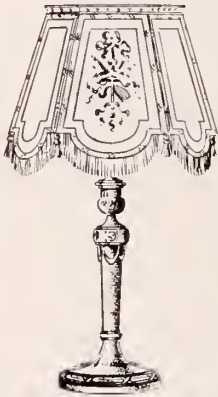
VILLAGES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Bronchitis	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Poly- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (1)	Puerperal Septicaemia
Ada	1,253	1,515	0														
Adrian	1,258	1,184	0														
Aitkin	1,719	1,896	2													1	
Akeley		1,635	0														
Alexandria	2,681	3,051	3													1	
Appleton	1,184	1,321	0														
Belle Plaine	1,121	1,301	2					1	1								
Benson	1,525	1,766	1														
Breckenridge	1,282	1,850	5												1		
Buffalo	1,040	1,124	2														
Caledonia	1,175	1,405	3														
Canby	1,100	1,505	2														
Cannon Falls	1,239	1,460	2													1	
Cass Lake	546	1,062	2	1													
Chatfield	1,426	1,300	4			1											
Chisholm		4,231	19	1		2						1			2		
Dawson	962	1,056	1	1													
Delano	967	1,023	2			1											
Fosston	864	1,000	0														
Frazee	1,000	1,146	1														
Glencoe	1,780	1,805	2														
Glenwood	1,116	1,718	1														
Graceville	856	1,032	1														
Grand Rapids	1,428	2,055	7	1													
Hallock	805	1,014	*														
Hibbing	2,481	6,566	12			2						1			2		
Jackson	1,756	1,776	3														
Janesville	1,254	1,205	1														
Kasson	1,112	1,049	0														
Kenyon	1,202	1,252	3	1		1											
Lake Crystal	1,215	1,231	0			1											
Lanesboro	1,102	1,041	1														
Long Prairie	1,385	1,256	1														
Madelia	1,272	1,290	0														
Milaca	1,204	1,319	1														
Mountain Lake	959	1,063	*														
North Mankato	939	1,129	1														
North St. Paul	1,110	1,400	1														
Olivia	970	1,019	0														
Osakis	917	1,056	0														
Park Rapids	1,313	1,719	3			1	1										
Pelican Rapids	1,033	1,095	1														
Perham	1,182	1,366	1														
Pine City	993	1,092	1														
Plainview	1,038	1,140	1			1											
Preston	1,278	1,320	0														
Princeton	1,319	1,704	4			1											
Renville	1,075	1,229	4					1									
Rush City	987	1,041	0					1									
Rushford	1,062	1,040	1														
St. Louis Park	1,325	1,491	0														
Sandstone	1,189	1,589	2			1											
Sauk Rapids	1,391	1,552	3	1		1			1								
Scanlon		1,122	0														
South Stillwater	1,422	1,572	1														
Springfield	1,511	1,546	1														
Spring Valley	1,770	1,573	*			1											
Staples	1,504	2,163	1														
Two Harbors	3,278	4,402	7														
Wadena	1,520	1,868	3														
Wells	2,017	1,814	0														
West Minneapolis	2,250	2,530	0														
Wheaton	1,132	1,346	0														
White Bear Lake	1,288	1,724	2									2					
Winnebago City	1,816	1,553	1	1													
Winthrop	815	1,031	1														
Zumbrota	1,119	1,129	0														
State Institutions			51	8	3	1		2								2	
Other parts of State	1,012,328	1,085,886	857	48	7	146	14	10	9	7	...	5	3	18	29	48	4
Total for State	1,751,395	1,979,658	2008	136	28	319	27	52	19	9	...	13	6	49	61	120	6

*No report received. Health Officer not doing his duty.

142 Still Births and Premature Births not included in above totals.

Your Credit Is Good at The New England.

For My Lady's Boudoir



DAINTY, BEAUTIFUL AND PRACTICAL are the Somnoe Lamps we are showing in our Lighting Fixture Section. They provide the Necessary Illumination for Reading or Desk Work, and Add Much to the Decorative Effect.

THE SHADES ARE WORKS OF ART in Silks of Beautiful Sheen and Soft Texture; Cretonnes re-

viving the Charming Tapestries and Figured Designs of by-gone days, Beautiful Period Patterns, Hand-Embroidered in Gold or Silver, and Leaded Glass with all the Lustre and Lure of Jewels. The Standards in Bronze, in Rich Browns, Refreshing Greens, Delicate Silver Finish or of Wood Composition, Splendidly Moulded and Chased, complete the Beautiful Effect of the Shades.

NO DAINTY BOUDOIR OR SLEEPING CHAMBER is complete without One of These Lamps, which range in Price from \$6.50 to \$22.00 each.

IF AT ALL INTERESTED IN LIGHTING FIXTURES, whether it be an individual Piece, a Room, or Entire House Equipment, "The New England" Lighting Department and its interested and skillful demonstrators and mechanics can be of great assistance, and at a very moderate expense.

We earnestly solicit an opportunity to demonstrate our facilities as lighting experts.

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Complete Furnishers of Homes, Offices, Hotels, Clubs, Churches, Theaters and Public Institutions.

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MINNEAPOLIS, MINN.

PUBLISHER'S DEPARTMENT

THE NEW LOCAL ANESTHETIC IN AMPOULE FORM

In consideration of the growing demand for quinine and urea hydrochloride for local anesthesia, Parke, Davis & Co. are marketing this valuable combination in convenient ampoule form, and the physician can procure it in one per cent solution, absolutely sterile and ready for use. The ampoules contain 5 cc. of the solution each and are supplied to the trade in boxes of six.

Quinine and urea hydrochloride is being used in a great variety of operative procedures with pronounced success. As a local anesthetic it is held by many physicians to be superior to cocaine, a contention which would seem to have warrant in view of the fact that the preparation is not toxic even in large doses, that it tends to restrain or prevent hemorrhage, and that the anesthesia produced by it is persistent. The latter point is worthy of especial emphasis. The anesthetic effect lasts for hours, sometimes for days, an important factor in connection with rectal and other operations that may be classed as painful.

THE VALUE OF PINEAPPLE JUICE

The man who thinks out and brings out a new food preparation usually has to create the "long-felt want" which he fills. In tackling the pineapple juice problem, no such difficulty confronted James D. Dole, of Honolulu.

When we eat pineapple it is for the juice alone, and the less fibrous and more tender the fruit, the juicier it is and the better we like it. When the doctor orders pineapple in cases of throat trouble or certain stomach and intestinal difficulties it is the pure, uncooked juice pressed from the ripest obtainable fruit which he wants his patients to have. It is this same refreshing juice which the nurse gives fever convalescents where cooling and slightly acid drinks are desirable.

So pineapple juice already had a place. The problem, then, which had to be solved, was how to get the pure juice of pineapple on the market in such a form that it would please the healthy lover of the fruit, and be useful to the doctor and the nurse.

A syrup would not do, because of the impossibility of suiting individual tastes. Even the juice of the finest Hawaiian canned pineapple would not answer with its small quantity of preservative pure cane sugar, because the physician needs to regulate the amount of sugar prescribed. To make a long story short, Mr. Dole spent years in experiments which finally resulted in this new and delightful drink.

Dole's is the juice of "picked ripe" Hawaiian Pineapple pressed out and bottled on the Islands where the fruit grows. Filtered, refined, sterilized in the bottle, retaining all the natural flavor and aroma, not a bit of sugar, water, preservative, or anything else is added. It has been seven months on the market. During this time the Juice has been distributed all over the United States, in some parts in ample quantities, while in others the supply has been very restricted. Its success has been most gratifying and unprecedented.

SALUTE THE GARDEN

As the winter months wear away, thoughts of the garden, flower and vegetable, take possession of all healthy minds; and happy is the man or woman who is planning with joy for the seed-time so soon at hand. If such man or woman is also planning to forestall every possible disappointment, he or she must seek for the best seeds obtainable. Experience and report of neighbors have taught us that Dreer of Philadelphia exercises so much care in the business of growing and collecting the best that his patrons, who have been such for from a single year to a generation or two, say if their seeds do not turn out the right kind of product, the planter, and not Dreer, is to blame. That is a delightful feeling to have; and if our readers would have it, they should ask Henry A. Dreer, Philadelphia, Pa., for his "Garden Book," which he sends free for the asking.

In its favor were the previous favorable reception of Hawaiian Pineapple, the general knowledge of its high quality, the therapeutic values of pineapple juice known to the medical profession, and the remarkable product itself. So, seven months have sufficed to give this new drink a large hold upon the people of the country until the demand is practically unlimited.

PNEUMONIA AND TYPHOID FEVER

In pneumonia and typhoid fever the question of treatment is largely one of expectancy. There are no specifics, and therefore the physician has to exercise his skill in keeping the heart of his patient going until the dis-

ease runs its natural course and ends by crisis or lysis, as the case may be.

"From the incipency of this disease to and through the convalescence, the condition of the heart is a haunting concern." (Dr. Frank S. Meara, N. Y. Medical Journal, Jan. 8, 1910.)

"All treatment is of no avail if the heart is not watched closely; here lies our success or failure." (Dr. W. H. Kahrs, American Medicine, June, 1910.)

In Digalen the physician has a valuable aid in the natural cure for these two ailments, for by its deep intramuscular injection, or its administration by mouth or rectum, the enfeebled heart can be toned up and cardiac syncope avoided. Furthermore, the marked hyperleucocytosis which is said by Mirano ("Riforma Medica," No. 23, 1907) to be produced within seven or eight hours after the injection of Digalen, and which becomes nearly doubled in the next twenty-four hours, is an important factor that ought not to be forgotten in the treatment of pneumonia, typhoid fever and the infectious diseases.

Dr. M. Hartwig, Buffalo, N. Y., consulting surgeon of the Erie and other hospitals, makes this statement: "Digalen has given me, in a few positively desperate cases, such unmitigated satisfaction that I am perfectly willing for the profession to know of my indorsement. I am convinced that in any case of defective heart compensation where Digalen fails, no remedy known today will accomplish anything."

(Digalen is a sterile solution of Cloetta's soluble diditoxin and is marketed by The Hoffman-La Roche Chemical Works, New York. Samples are furnished to physicians on request.)

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, MARCH 15, 1911

No. 6

A DEMONSTRATION OF THE SERUM DIAGNOSIS OF SYPHILIS*

By R. H. MULLIN, M. B.

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MINNEAPOLIS

To Ehrlich's studies on immunity we owe the test which has recently come so generally into use for determining the presence of syphilis. To understand the principles upon which the reaction is based a knowledge of Ehrlich's side-chain theory is essential. In this theory he describes three distinct orders of substances which are formed in the endeavor of an infected host to protect itself against the infecting agent. The first consists of the antitoxins, the second of the agglutinins and precipitins, and the third of the lysins. It is the third order which is concerned in this reaction.

By a *lysin* is meant a substance contained in the serum of an animal which has been immunized against a foreign cell, either naturally, during the course of an infectious disease, or artificially, in laboratory animals during experimentation. These lysins are characterized by the fact that they are capable, under certain conditions, of causing the solution of the offending foreign cell. The manner in which this solution is brought about should be thoroughly understood.

There are three factors concerned, constituting what is known as a lytic system: first, the offending foreign cell; second, the so-called amboceptor; and, third, the complement.

By *amboceptor* is meant a specific substance found in the serum of an animal which has been immunized against a certain foreign cell. By *complement* is meant a substance found

in fresh normal serum which is capable of being united to the foreign cell by the amboceptor. All three elements must be present in order that lysis may occur. The union is brought about in a certain definite way, the amboceptor acting as a coupler which unites the complement to the cell. It is therefore spoken of as having two combining groups, one group uniting with the cell, the other with the complement. The cell and complement cannot be united without the presence of this amboceptor, so that it is possible for them to exist side by side and still retain their identity, provided the amboceptor be absent.

It is now pretty generally accepted that the causative agent of syphilis is the *treponema pallidum*, and there is no reason for not believing that the body will produce an amboceptor against this organism in exactly the same way as it does against other organisms in other infectious diseases. The serum-reaction is simply a test to determine the presence or absence of syphilitic amboceptor in a given serum. Theoretically easy, practically it is a matter of some difficulty.

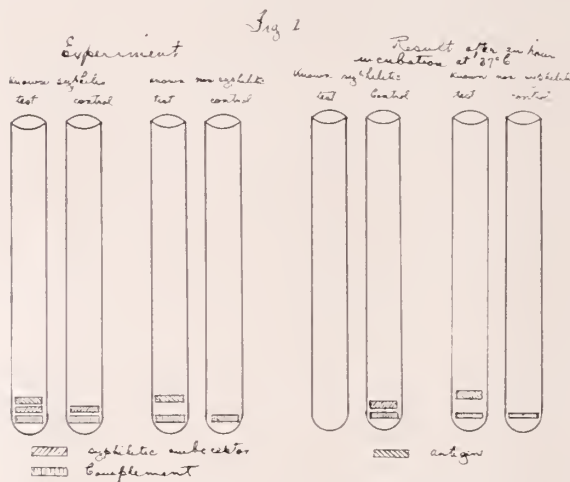
In the first place, up to date, it has been found impossible to grow the causative organism, so that pure cultures are not obtainable. Therefore, one of the constituents required to complete a lytic system in vitro is lacking. Wassermann conceived the idea of endeavoring to obtain a substitute, using, in place of the pure culture, an extract of the liver of a syphilitic fetus, a tissue in which the organisms exist in very great num-

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

bers. To this extract, or modifications of it, is given the name of *antigen*.

A second difficulty then presented itself in that even when such a substitution was made there did not appear direct manifestations of the presence or absence of any reaction. An indirect method which would give some visible manifestation had therefore to be employed. For this purpose an additional lytic system was necessary. The one adopted was a hemolytic system, inasmuch as when lysis is completed, using red-blood cells and a red-blood cell amboceptor, the result is quite apparent to the naked eye, for during the process of solution the hemoglobin is released from the red cells into the fluid in which they have been suspended.

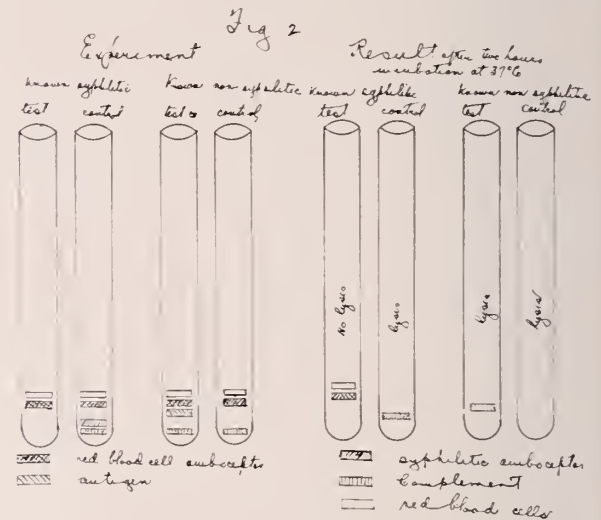
A graphic representation of what occurs may aid considerably in understanding the reaction. In Fig. 1 is represented the first part of the



test, the figures on the left showing the experiment and those on the right the result. A pair of test-tubes containing a known syphilitic serum and a second pair containing a known non-syphilitic serum are used. Into all four test-tubes is put a unit of complement. To one of each pair is added some syphilitic antigen. In the pair containing serum from the case of known syphilis there will be found, as a result of the infection process, some syphilitic amboceptor, which will be absent in the pair containing non-syphilitic serum. All four tubes are then incubated for one hour. On the right is represented what has occurred at the end of this hour. The antigen, syphilitic amboceptor, and complement in the test of the syphilitic serum, completing a lytic system, will all have been united and will therefore have disappeared from the solution

in exactly the same way as a salt can be precipitated from a solution. The control-tube of this pair will still contain complement and syphilitic-amboceptor, inasmuch as there is present no antigen and the system remains incomplete. In the case of the non-syphilitic pair the test will contain complement and antigen; the control, complement alone.

To all four of these tubes are added red-blood cells and red-blood cell amboceptor, this addition being represented on the left side of Fig. 2. The tubes are again incubated, this time for two hours, and the result is represented on the right side of Fig. 2. We find that of the syphilitic



pair of tubes the test will still contain red-blood cells and the red-blood cell amboceptor, inasmuch as there is no complement to complete the reaction. In the control-tube, however, we find that there was free complement present, so that the system is completed and lysis has occurred. There will be left free some syphilitic amboceptor.

In each of the non-syphilitic pair of tubes we find that there was complement, red-blood cell amboceptor, and red-blood cells, so that lysis has occurred in both. In the test there will also be found free the antigen originally placed in the tube.

Given, then, a serum from a patient suspected of syphilis, how can one determine whether or not syphilis is present? To a drop of such serum there is added a unit of antigen and a unit of complement. If there be syphilitic amboceptor present in the suspected serum, i. e., if the patient has been infected with the *treponema pallidum* and it has produced in him amboceptor.

it will cause the union of the complement to the antigen, thereby using up all of the complement. Whether such a combination has occurred or not can be determined by ascertaining if there is any free complement after sufficient time has been allowed for a reaction to take place.

To the tube containing the mixture of antigen, suspected serum, and complement there is added a unit of red cells and a unit of amboceptor specific for these red cells. If free complement is present lysis will occur. Free complement will be present only when it has not been used up in the first portion of the test. It will not have been used up in the first portion of the test when syphilitic amboceptor is absent. Theoretically, syphilitic amboceptor will be absent when the patient has not been infected by *treponema pallidum*, so that lysis will occur when syphilis is absent.

In applying the test considerable care is necessary in the preparation of the various materials which are required. There has been a very considerable amount of discussion concerning the nature of the so-called syphilitic antigen. It was originally made as a substitute for the pure culture of the causative agent, being taken from the liver, where the *treponemas* are so abundantly found. Various methods of preparation have been adopted, some using an alcoholic extract of liver, others using a watery extract. Against both of these can be raised the objection that they are comparatively unstable. Extract of guinea-pig heart and crude lecithin have also been used.

Noguchi has devised a method which gives an antigen which will retain its stability for a considerable length of time. He extracts the organ used in absolute alcohol for several days at a temperature of 37°. The alcohol is then evaporated by means of an electric fan, the residue dissolved in ether, and the resulting solution fractionated with acetone. A precipitate settles to the bottom of the vessel, and the supernatant fluid is decanted, leaving a dark-brown, sticky mass. For actual use in the test a small amount of this sticky mass is again dissolved in ether, impregnated on paper, or diluted with normal salt.

It should be noted that this process gives lipoids which are probably not in any way related to the *treponema pallidum*. They may be found in tissue from individuals who have never suffered from syphilis, so that one must realize that in this serum test for syphilis we are not

dealing with an antigen specific for the *treponema pallidum*. What occurs may be that during the course of the disease the amount of these lipoids is considerably increased and that at the same time antibodies against these lipoids are formed, so that the so-called syphilitic amboceptor may be really an amboceptor against these lipoids.

Large numbers of tests have demonstrated the fact that in syphilis these lipoids and their antibodies are formed to a very considerable extent. They are also probably formed in leprosy and a few other diseases, thus accounting for the positive results obtained in patients suffering from these diseases but who have never been luetic.

It must be noted that this reaction is a quantitative one, so that it is necessary to use definite quantities of each reagent. For this purpose titration is necessary. In titrating the antigen two series of tubes are necessary. In each of one series is placed a drop of known syphilitic serum; in each of the other, a drop of known non-syphilitic serum. Antigen is then added to all the tubes of each set, increasing the amount in each successive pair. They are incubated for an hour and tested for free complement in the ordinary way. It will be found that the larger quantities of antigen will inhibit hemolysis, even in the known non-syphilitic serum, but that smaller quantities will not do this. Depending upon the strength of the antigen, very much smaller quantities will inhibit hemolysis when added to syphilitic serum. The largest amount which will not inhibit hemolysis in non-syphilitic serum, but which does inhibit with syphilitic serum, is the unit for that particular antigen.

Patient's serum.—This may be obtained either from the finger or from the lobe of the ear, preferably in a small tube, and allowed to clot. Two or three c. c. are all that is required. When the serum is fresh, i. e., not older than three or four days, it is not necessary to inactivate it, but where the blood has been kept for a longer period it has been found that it frequently contains substances which are of themselves anticomplementary and which will, even in the absence of any syphilitic amboceptor, bind the complement. In such cases it is necessary for the destruction of these anticomplementary substances to inactivate the serum by heating to 55° for 15 minutes. This heating will at the same time decrease the amount of any syphilitic amboceptor that may be present. It has been found that this decrease of amboceptor occurs

most rapidly at first and more slowly later on. At the end of from fifteen to thirty minutes the serum will contain only one-fourth as much as did the original unheated serum. For this reason, when inactivated serum is used for the test, it is necessary to increase the amount to four times the amount of fresh serum. In estimating the amount of fresh serum necessary one drop is usually employed, that is, a drop from a capillary pipette, which will be found to contain approximately .02 c. c. of serum.

Complement.—This is usually obtained from a guinea-pig. The animal may either be sacrificed by being bled to death or small quantities may be obtained by puncture of the heart, after the animal has been anesthetized. After obtaining the blood it is allowed to clot and a unit of complement determined. This has been found to be about .02 c. c. In order to facilitate measurements the serum is usually diluted one and one-half times and .01 c. c. of such dilution is used. This complement is very unstable, so that guinea-pig blood will contain complement usually not longer than forty-eight hours. It should be kept continuously in the ice-box when not in use, as complement is more rapidly destroyed at room temperature than at lower temperatures.

Red-blood cell amboceptor.—This is prepared from rabbits by immunizing them against red-blood cells. The red cells of any animal may be used. Wassermann uses sheep, Detre uses horse, and Noguchi uses human. At the time of the test human red cells are usually more readily obtainable. In addition the patient's blood may contain some natural antibodies against foreign red cells, which might interfere with the result, so that it is more advisable to adopt a human hemolytic system for the test. For the purpose of immunizing the rabbit placental blood is most frequently used. It should be defibrinated and thoroughly washed so as to free it from any traces of serum. Intraperitoneal injections increasing in size, starting usually with 5 c. c. and running up to 20 c. c., are given at three day intervals. Usually five or six injections are sufficient, and it then can be determined by test that the rabbit's serum does contain the red-blood cell amboceptor. A comparatively powerful serum is best. After it has been found by test that the serum is sufficiently powerful, the animal is killed by bleeding to death, the blood collected allowed to clot, and the serum separat-

ed. Noguchi recommends that this serum be impregnated on papers, which certainly gives a very easy method for working purposes and has the additional advantage that the serum so impregnated will keep for a very considerable period of time without danger of infection. It is necessary to titrate this serum to determine its strength. A unit of amboceptor is that amount which will just hemolyze 1 c. c. of blood-cell suspension in the presence of .02 c. c. of complement. To determine the amount of paper which will contain a unit, the paper is cut in strips usually two or three mm. wide, and increasing lengths of such strips are added to each of a series of tubes which contain in addition 1 c. c. of blood-cell suspension and .02 c. c. of complement. That tube which is just hemolyzed at the end of one hour's incubation represents the length of strip which will contain one unit of amboceptor.

Red-blood cells.—These can be obtained, if the human system is used, at the time of the test. A five per cent suspension in salt solution has been arbitrarily fixed as the dilution required. This can be approximately obtained by allowing one drop of blood to four c. c. of salt solution. It is advisable to thoroughly wash the cells with salt solution by means of a centrifuge in order to free them from any traces of serum. The salt solution should be isotonic so as to prevent any natural lysis. Such a blood suspension may be kept for three or four days on ice.

Like many other laboratory examinations the serum test for syphilis should be an aid to clinical diagnosis rather than the main point upon which the diagnosis is made. It is necessary to realize that the test is not specific in the true sense of that term, nor is it always absolutely reliable, failing in some positive cases and giving positive results occasionally where lues does not exist. Therefore, where the results of such a test do not conform with the clinical signs and the symptoms, too much reliance should not be placed upon a single examination, but repeated trials should be made. A careful history of the individual from whom the suspected serum is taken, including an accurate account of whatever treatment has been given, should accompany each specimen. When there is co-operation between the clinician and the laboratory worker, the serum test is certainly a very valuable aid, not only in the diagnosis, but also in the treatment of lues.

PROGRESSIVE THERAPEUTIC STANDARDS*

By C. A. DONALDSON, M. D.

MINNEAPOLIS

The evolution of medical teaching in the last quarter century is common knowledge. So much has been said and written recently regarding medical schools that some have erroneously come to use the terms *school* and *education* synonymously. Medical history reveals the fact that the undergraduate school, whether ranking first or last in the scale of schools, is rather the kindergarten of medical education. A single reference illustrates this: The leading members of our profession today are the product of schools whose requirements twenty-five years ago would not now be tolerated. Many of these men graduated during the period of short courses. They are leaders, not because of their limited undergraduate school, but, having recognized that limitation, they have utilized the fourfold department of the larger graduate school, viz.:

- (a) Experience with observation.
- (b) Post-graduate schools.
- (c) Medical literature.
- (d) Musical societies.

Few physicians of this earlier graduation bear academic titles. If we keep in mind these facts, and the consequent handicap to these workers, the amount of work done is tremendous, and the advancement of medical education and, consequently, the advancement of medical school requirements have been wonderful. Men in actual practice are the essential factors in medical education. But it is waste of time to congratulate ourselves on the past. Its only use is that we may more carefully estimate the present facts and prepare for the future necessities. The older schools, while greatly deficient in technic, were strong in the development of character, but no amount of laboratory technic can supplant in any degree the great need of men and women of strong character and high ideals. Unless character development keeps pace with laboratory development in our medical training our progressive claims may be seriously questioned.

CHARACTER STUDY

The medical profession needs to revive the higher ideals of success when too many are willing to measure it in dollars. There is less risk today of neglecting the financial part of our busi-

ness, and we should not overlook this, but we need to recall the characteristics of such men now living as Dr. Trudeau, whose life of loving service to humanity has made the Adirondacks a household name to more than tubercular patients, and of Dr. Grenfell, whose buoyancy is an inspiration, not only to Labrador, but to all mankind. And we may well afford to study that unique medical character of history, whose work covers less than four years, and who acquired and holds the title, "The Great Physician." We need not here discuss whether he did or did not possess superhuman power. It is sufficient to discover, if we may, some of the reasons for his medical success. His conception of therapeutic measures was worldwide. He was not above using mere drugs in the day when the psychic elements predominated. He knew both when and how to apply hydrotherapy and light-therapy. When he stopped persistent hemorrhage, he brought into use some psychic or other influence, perhaps unknown to us, whose contractile force closed the bleeding points, even as the bleeding mucous membrane responds to the positive galvanic electrode. While his whole life demonstrated the wide range of therapeutic measures, he showed and taught such respectful recognition of constituted authority that accepted forms were not unnecessarily thrust aside.

Medicine may be conveniently arranged under three heads:

1. Health, including all studies pertaining to the recognition of the body in its normal healthful condition, also hygiene and preventive medicine.

2. Pathology, including every study helpful in the recognition and classification of abnormal conditions.

3. Therapy, including every remedial agent.

Professional knowledge of the first and second divisions has reached a very satisfactory and scientific basis and needs no discussion. The least standard of safety is a training sufficient to recognize health and disease. Public welfare demands that those who care for the individual and public health, shall have the best possible training in all that pertains thereto.

THERAPY

To an inquiring and suffering humanity, ask-

*President's address, delivered before the Hennepin County Medical Society, January 9, 1911.

ing what can you do for us, the medical profession submits a threefold answer: First, serum therapy, for a few diseases; second, drug medication, more or less discredited, even by physicians; and, third, surgery, adding to each of these three, hygienic and dietetic measures.

The surgical beds in our hospitals so far outnumber all others that the impression given to both medical students and the public is, that surgery is the great factor in medicine. Surgical development should not so eclipse all other professional effort, but, rather, it should stimulate a similar advance in other lines of treatment. Giving full credit to the deservedly brilliant achievements of surgery, and ignoring, if the profession can afford to do so, that pseudosurgery which without proper post-graduate preparation abounds, we must not fail to recognize surgical limitation, not only as to the cases applicable, but as to the urgent need of both coincident and subsequent therapy of other character. Suppose that the germ origin should be definitely established in practically all disease, and the future should reveal a vaccine or serum for each one, there still remains a field for surgery and mechanical support. Damaged muscle, nerve, and arterial wall remaining after germ elimination and surgical interference will still demand attention whether remedial agents are capable of partial or complete restoration. To limit such effort to the partially discredited drug-medication and the present limited scope of serum-therapy, is to miss the 20th century view of medical possibilities. To deny this class of suffering humanity anything except drug-medication and surgery is to lessen public confidence in the scope and growth of medical judgment. To belittle the scientific efforts to establish other than drug-treatment, is to display ignorance of the subject. Excepting surgery a large part of our therapy is on an exceedingly unstable basis. You can easily demonstrate this by presenting, as I have recently done, a single case to a score of physicians and note the widely varying prescriptions of each one. We owe it to ourselves and to the public to take a large step forward therapeutically.

The advent of the germ theory naturally shook the medical confidence in the drug-therapy then in vogue. The failure of vaccine and antitoxic serum to fill the gap left, except to a limited degree, developed or increased a serious skepticism regarding all therapy. Regarding this seriousness, I quote Dr. C. Eugene Riggs, of our State University. In a recent article (Manitoba Med.

A., June, 1909) he says: "Indifference to things therapeutic is not a characteristic of the German mind alone, nor of the neurologist; it is a universal fault. The vital thing to the patient is not the exact character of the clinical syndrome, but, rather, what can be done for him. This spirit of medical nihilism has no basis in fact, and is at war with the scientific tendency of the age. Our profession is in danger, in its attitude toward therapeutics, of overlooking absolutely the value of palliation when a cure is impossible. It is our failure to do this that causes these patients to drift into the hands of that large and growing class of medical deviates—the charlatans and quacks."

PHYSICAL THERAPY

The manifest interest of a considerable number of our profession in one or more forms of physical therapy demands more than a passing notice. Because some of the non-medical sects, ignoring their own peculiar claims, owe much of their success to the empirical use of these agents, some ridicule has been heaped upon physicians using them. Physical therapy being thus handicapped and being further held in check by the failure of any clinical and little, if any, didactic teaching in our medical schools, and having to overcome the burden of commercial teaching by instrument agents, has yet shown substantial progress. I need only refer you to the painstaking scientific investigations of Titus and De Kraft of New York, who have made extensive observations confirming similar observations by Continental workers, of the relation of high-frequency currents to blood-pressure, thus fixing one step in therapeutic advance. But our conservative American Medical Association, more cautious than the British Association, declines to recognize and encourage these efforts, and at its last meeting refused a petition to establish a section on physical therapy. I have in my possession letters from four of the five members of the committee above which reported adversely, and while they each give different reasons for such unfavorable report, they are united in expressing their belief in the vital necessity for the adoption of such section. Since some progress is noted against so much indifference, might we not reasonably expect, with the aid of medical teaching and society assistance, to speedily eliminate such rubbish as doubtless belongs to these modalities, and, by the fixing of their definite limitations, to secure such scientific therapy as

they offer? It is high time that medical teaching cease generalization, in dealing with this subject. Physical therapy deserves better consideration from men of recognized ability when they attempt to advise its application. When such men as Forchheimer and Osler advise the use of electricity, in the treatment of various diseases, without further specification, they entirely ignore the fact that the varieties of electrical application are so different in their physics that the word *electricity* conveys no therapeutic intelligence. When such writers are more specific, as occasionally appears, and prescribe galvanism, the reader has the right to know whether the author advocates, for the active electrode, the positive, which lessens blood-supply, or the negative, which increases blood in the part. It is a noteworthy fact that among those practitioners who have used the continuous current without beneficial results in properly selected cases, the larger percentage of them have been indifferent as to the polarity chosen. Scientific appreciation or successful application of other physical modalities requires a technic selected with equal care.

NON-MEDICAL

We cannot ignore that large and growing class of non-medical practitioners who are present, some of them with legal recognition in this state. A rather extensive investigation of their work was made by Dr. E. G. Jones, of Burlington, New Jersey, (*Medical Standard*, August, 1910). He estimates that they reach nearly one-third the families of our population. It is not necessary to accept his conclusions to recognize the serious character of this movement. Is it unreasonable to suppose that part of the cause that leads these people to reject the better trained, for the less competent, practitioners, is that the latter are more willing to do something for them, while the former are more anxious to diagnose. May we not properly find another cause in the manifest skepticism regarding drug-therapy? A third cause may lie at our own door because of the attitude we assume toward those who differ from us. In the quotation from Dr. Riggs is a fourth cause, our failure to develop palliative remedies.

CLASSIFICATION OF NON-MEDICAL

If we are to be fair in our judgment and hopeful of finding a remedy, we must distinguish between those non-medical sects who resort to pure quackery, and those who have established schools

of limited courses. While our profession bends itself to the task of perfecting our own therapy, we should educate the public and the legislature to the necessity of raising the standards of such non-medical schools and refusing recognition to any of less training.

FUNDAMENTALS (COMMON PLATFORM)

No greater opportunity has been presented to the medical profession than this, an opportunity requiring the highest application of ethics, the putting aside of personal prejudice and in granting the right of honest differences of opinion, asking only one broad common platform, efficient training in fundamentals, and making the highest present developed course the standard for such common ground. The properly trained intelligence that can recognize conditions of health in the human body, and can accurately diagnose disease in the same, may safely be trusted to use the individual choice of therapeutic measures. Touching such ability no other system has yet given such a careful and thorough course in the study of the normal and pathological body as exists today in our medical schools, and until such course is established an intelligent public cannot fail to accept this as the highest present standard demanded from all those who deal with and treat health and disease.

STATE BOARD EXAMINATION

Upon such a basis we might safely and consistently ask our State legislature to so modify our medical examination act that the two main divisions of medical education, including every branch pertaining to the recognition of health and disease, should constitute the common basis of State requirements for practice, and that all should be required to pass such board, allowing the State to establish separate boards or examiners on therapy only. Our neighboring State of Wisconsin has not only passed some such law, but has provided for a progressive standard for at least one non-medical school, approaching somewhat the standard of our medical schools in fundamentals. The adoption of such law must tend to elevate the standard of all non-medical schools which have any interest in scientific development. It should be our desire and purpose to assist any such manifestation.

MINNESOTA STANDARD

Advancement in medical standards has had a distinct era since June, 1886, when the resolution of Dr. Millard in the State Association, rais-

ing the school requirements to three sessions of five months each and establishing a State Board of Examiners, was amended by Dr. J. T. Moore, making the time three years of six months and requiring those graduating outside the State to pass examination. Minnesota having led in State requirements, has a great opportunity now to join our sister State in an act that shall cement together all intelligently trained practitioners in one common warfare against incompetents. The Hennepin County Society being the largest county society has a tremendous responsibility.

More than a century ago our medical family was disturbed, and the circle broken, by the passing out from it of Hahnemann and his followers, protesting against certain conditions. Today the door is open and many of these brother practitioners have accepted the invitation to come in, both they and we demanding the same thorough preliminary preparation, both recognizing, at least in part, the possibility of differing individual judgment, both recognizing the absolute unity of a standard of the human body in health, both accepting the self-evident fact that any single disease in a single individual at the same time cannot possibly have a double standard of pathology, and that, whatever theories may be advanced by medical or non-medical practitioners concerning either the cause or the development of disease, the only possible difference presenting must be the ability of the individual to make such observation. But we cannot deal fairly with non-medical sects nor carry with us public approval in any appeal we make if we fail to give a square deal to our professional brothers who, equally trained with us in all the fundamentals, accepting and practicing the same surgery, midwifery, hygiene, and serum-therapy, differ from us only in drug-therapy. If medical schools should consider it wise to establish separate courses for special lines of professional activity, students might elect certain courses, but along any one line the undergraduate is incompetent to choose what should be taught him. Such a position is untenable. Physicians in active practice are the only competent judges of what constitutes reasonable therapy. Otherwise we shift the burden of responsibility from the profession, where it belongs, and place it upon the student, who is not yet ready to undertake it. Homeopathic therapy deserves no greater privilege than any other therapy, viz., the right to be taught, and if taught by the State it cannot refuse the same tests for efficiency, both laboratory

and clinical, that is required of other therapy, and when so submitted should have compulsory teaching. Regular medicine, having the majority control, can afford to grant no less than this, an equal opportunity to be heard. One's own plan and action easily appears reasonable from a single viewpoint. To get the whole truth we must add all the light obtainable. Suppose the situation at our State University was reversed, placing Homeopathy in the large majority, reducing regular medicine to two instructors and these elective, refusing them even clinical instruction, how many of the latter would consider the arrangement fair? I have no personal faith in either the doctrines or the therapy of Hahnemann; but those of us who do not believe in Homeopathy can well afford to be even more than fair towards its followers, for this similia system will never disappear from medicine unless it fail to meet absolutely fair scientific tests. And if all therapy is so submitted, and Homeopathy should so disappear, it is likely to carry with it much therapeutic rubbish from the regular's prescription-book. No physician, regardless of designation, can afford to continue any treatment that fails to meet scientific inquiry. No physician, singly or organized, can afford to shut the door of scientific inquiry on any form of therapy. The public demands a scientific therapy, but, pending such, it demands the present most promising one.

EVOLUTION OF SCHOOL CONTROL

A recent editorial in one of our daily papers describes the evolution of the old English universities progressing from ecclesiastical to State, and finally into alumni, control with decided gain to the institution, and adds, "The greatest American university is passing, if it has not passed wholly, under control of governors chosen by alumni."

INITIATIVE

This evolution of European universities brings to our attention the necessity for closer relation between the teacher and those most interested in the things taught. The alumni of our State medical school, though somewhat widely scattered, might wisely exercise a certain choice in the school governors. A more definite selection, however, would be to make the physicians of this State, those who have passed the State Board examinations, the unit, who should have certain privileges when they choose to exercise such initiative. A petition from a certain per-

cent of these, say ten per cent, should establish at our State medical school the teaching of any therapeutic measure for a period of five years, such teaching to be both laboratory and clinical, of a tentative character, and require a second petition for a second period of five years. This tentative teaching, if taught by one thoroughly familiar with the subject, and regularly submitted to any medical criticism, should more rapidly eliminate the chaff and protect the grain we want. The spectacle of medical enthusiasm so exaggerated as to lose sight of scientific accuracy, is no more pleasing or creditable than is the ultra-conservative attitude of those willing to miss progressive opportunities. We need both elements in the study and selection of our therapeutic measures, and should eliminate all jealousy or resentment "in mutual recognition that each has an essential contribution to make to orderly development."

All that has been and is now being done in laboratory and clinical tabulation of therapeutic results needs to be greatly enlarged. The line between fixed or determined remedies and the allowable or tentative ones, must be made clearer. This twofold teaching should be emphasized. Every remedy that cannot be taught with definite confidence should have no place in fixed therapy, even if the result makes this selection exceedingly small. A definite standard should be fixed of clinical and laboratory tests, that shall entitle any remedy or modality to a place in fixed therapy. That the adoption of such standard involves many difficulties in no sense relieves our responsibility for its solution. Tentative therapy should be broad enough to include any fairly reasonable mode of treatment. It should have departments for each class, including, first, serum, second, drug, third,

Homeopathic drug, and fourth, physical; and it should provide for the possible development of other departments. Each department should have a limited place in compulsory teaching that would necessitate the selection of only the most promising remedies, but the student should have access to the full department if he choose to make further investigation. A fifth department for psychic therapy should be established either now or soon. Its bearing upon every other therapy is evidenced by our tendency to attribute every result which we cannot explain to the psychic. In proportion as we can separate the psychic elements from others we shall establish a more scientific basis. Our advancement will be more rapid if we fully realize the self-limited character of acute diseases and the exceedingly small factor that drug-medication plays in such cases. While our standard of training in any fixed department of medicine cannot be too rigid, the somewhat changeable character of our therapy, even during the professional life of those present, bids us offer a large liberty to any mode of treatment whose advocates are willing to submit it to such scientific tests. The opening of this second decade of the twentieth century beckons us to this task. The profession is able to meet it. No society in the Northwest is better equipped with men and women of ability to lead in such an effort. The public looks on with well-developed interest to see how big is the development and how broad is the mental vision of the medical profession for this emergency. If we are willing to grasp this situation with all its possibilities, this lagging factor in medical progress will soon cease to be so rated, for our profession will have arrived at that desired goal, with each department upon a definite scientific foundation.

SEXUAL EXCITABILITY IN MEN OF ADVANCED YEARS*

BY FRANKLIN R. WRIGHT, M. D.

Clinical Professor of Genito-urinary Diseases, University of Minnesota, and Genito-urinary Surgeon to St. Barnabas and the Minneapolis City Hospitals.

MINNEAPOLIS

At a meeting of the American Medical Association,† Dr. J. F. Percy, of Galesburg, Ill., read a paper entitled, "Phrenitis Prostatica," in

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.
†Journal of the American Medical Association, July 2, 1910.

which he attributed the sexual excitement, which occasionally occurs in men of advanced years, to an inflammation of the mind due to some change which has taken place in the prostate. He states that the symptoms which these men present,

"have back of them as yet an undescribed pathology." I wish to direct your attention to this undescribed pathology. In order to do this it is necessary to consider briefly the physiology of the genital organs.

The exact internal processes by which these sexual desires are stimulated and controlled, are still unknown. It is certain, however, that the sexual centers in the cortex of the brain are stimulated by impulses, which originate in the genital organs, and that the intensity of the stimulation depends on the normal or pathological condition of these organs. Dr. Löwenfeld, of Munich,†† says that this cortical stimulation is not due simply or chiefly to mechanical irritation (pressure and stretching), in the peripheral genital organs, but to chemical substances in the blood, which are produced chiefly, but not entirely, by the testicles. These substances he calls *libidogene*.

It is a well known physiological fact that, whenever the seminal vesicles of a youth or young adult become filled, the individual becomes sexually very excitable; that if he has intercourse or an emission during his sleep, this state of excitement passes away, to return with the refilling of his seminal vesicles. The length of time which elapses between these waves of sexual excitement, may be short in the robust youth or young adult, but generally lengthens as he advances in years, until at the age of sixty or sixty-five years they fail to recur, even after long periods; and the man has his sexual life behind him.

The function of the seminal vesicles is not clearly understood. Formerly they were believed to be simply reservoirs, in which the secretion of the testicle was collected and stored, until such time as the individual might have intercourse. Investigations carried on during the past few years have proven this idea erroneous, and have shown that the seminal vesicle is in reality a secreting gland; that the larger part of its contents is of its own production, and the smaller part that of the testicle.

Prof. Exner, of Vienna, in discussing the physiology of the seminal vesicle* says, that from the study of the histology of the seminal vesicle he has long been convinced, that it is capable of acting as an organ of absorption. He also says that the amount of secretion of the testicle is more than can be accounted for by the nocturnal

emissions of a man who does not have intercourse, and he asks where this surplus secretion is destroyed and absorbed. This question he answers negatively by stating, that histological study of the vas deferens, the epididymis and testicle fails to reveal any tissue capable of absorbing this secretion.

Distention of the seminal vesicle with semen* causes an increased sexual excitability for the individual; but the man whose seminal vesicles are impaired by a chronic inflammation, is always sexually below par. Since the filling of the seminal vesicles with semen excites the sexual desires, and the filling of them with pus does not, it is probable that some substance, which stimulates the sexual centers in the brain, is absorbed by the seminal vesicle from the semen it contains, and that in the ability of the seminal vesicle to absorb the secretion of the testicle is to be found the avenue, through which the *libidogenetic* substance is forwarded from the genital organs to the cerebral centers.

Reasoning from this, anything which will cause an increased absorption by the seminal vesicle, should cause a corresponding increase in the sexual excitability of the individual. In order then to account for an abnormal sexual excitement in old men, we should look for some condition in the genital organs which will cause, or give opportunity for, an increased absorption of the secretion of the testicle.

Theoretically, there are two conditions which will cause, or give opportunity for, this increased absorption.

The first. Anything which will cause a stagnation of the secretion of the testicle in the seminal vesicle.

The second. Anything which will stimulate the seminal vesicle to greater absorption.

If a tumor, of sufficient size to occlude the ejaculatory duct, should develop in the prostate of a man in whom the seminal vesicles and testicles are still active, that is, before the end of his sexual life, this first condition would be produced. This man might have intercourse, but his relief would be temporary only, he would be unable to empty his seminal vesicles, but, they being constantly filled with semen would continue to absorb *libidogenetic* material and in a few hours he would be as bad as ever. If the production and absorption of this *libidogenetic* sub-

††*Sexual-Leben und Nerven-Krankheiten*.

**Handbuch der Urologie*, Vol. I.

*The term semen is used to mean the mixture of the secretions of the seminal vesicle and testicle, contained in the seminal vesicles.

stance were excessive, this man might become maniacal.

Removal of this man's prostate would restore him to health, because it would re-establish drainage in the seminal vesicles, and stop the excessive absorption of the libidogenetic material.

As a proof that this condition exists, we need only go to the dead-house and take a fresh specimen of an enlarged prostate, one in which a large tumor has developed, and look for the ejaculatory ducts. They are not to be found. They have been obliterated by pressure of the prostatic tumor. Now examine the seminal vesicles, and, not in all but in some cases, they will be found distended with semen. This semen must have been produced after the ejaculatory duct became closed.

To account for an increased absorption by the seminal vesicles we must look for a constitutional cause, and this we find, paradoxical as it may seem, in the loss of weight, which sometimes occurs with advancing years.

People as they grow old gradually separate into two classes. The first class are those who gain in weight; they weigh, at sixty years of age, twenty-five to forty pounds more than they did at forty; their skin becomes smooth; all its lines disappear, due to the increased amount of adipose.

The second class are those who lose weight. At forty years of age they are plump and well nourished; at seventy they have lost from twenty-five to forty pounds; they become thin and

scrawny, their skin is wrinkled and hangs in folds over their bodies. This loss of weight, and this wrinkling of the skin, are due to the disappearance of the adipose tissue. The loss of fat occurs not only subcutaneously, but in the internal organs as well.

The loss of fat in and about the genital organs, and the accompanying relaxation of the scrotum, robs the testicle of its normal support and it simply hangs on a cord attached above to the seminal vesicle. If this occurs before the seminal vesicle and the testicle have undergone senile atrophy, that is before the end of the man's sexual life, the seminal vesicle will be filled with semen, and the abnormal weight of the testicle hanging on it will act as an irritant, and stimulate it to increased activity, and we have the result manifested in the abnormal sexual excitement.

This man will never be maniacal in his actions, because, when he has intercourse, he empties his seminal vesicles, and stops temporarily the absorption of libidogenetic substance. He simply feels that his youth has been restored to him, and begins making plans to marry some girl forty years his junior.

This man may or may not have an enlarged prostate, but if he has, the tumor does not occlude the ejaculatory ducts. The treatment of this man is very simple. All that is necessary to do is to strap a close-fitting suspensory bandage on him, and he is well in a few days.

VESICAL CALCULI

By CARL J. HOLMAN, M. D.

MANKATO, MINN.

Foreign or secondary calculus in the bladder is rather a simple proposition. Its evolution depends on the presence of catarrh or of a foreign body in the bladder. If there is bladder catarrh, pus and blood act as foreign bodies, and there is deposited upon them the sediment of cystic urine, the most common being ammoniomagnesium phosphate and carbonate and phosphate of lime. If the urine becomes alkaline, owing to a deposit of urea, the pus assumes a thick, ropy character, which makes its expulsion difficult, as it adheres firmly to the wall of the bladder. These masses are favorable for the reception of pre-

cipitated urinary salts. (Casper and Bonney.)

The following case is of some interest in connection with the above:

Case 1.—Mr. O., aged 60, called me to see him on account of the pain in his bladder. He was a well-to-do man and had traveled extensively, the later few years, in search of health. He had consulted many physicians, but had never been examined locally by any of them, and had spent large sums of money for treatment for bladder trouble. He complained of painful micturition and passed thick, ropy urine. I removed him to Immanuel Hospital, where an examination

with a sound revealed the grating sound of stones. With a suprapubic cystotomy six stones like those shown in Fig. 1 were removed. He



Fig. 1. Stones from the bladder in Case 1.

died 36 hours later, presumably of exhaustion. The point I wish to make is the necessity of examination, coupled with x-ray examination, if possible.

Case 2.—A young girl of 17, who was seized with a frequent desire to urinate. She stated to her mother that about 18 months prior to this time she had accidentally inserted a hairpin into her bladder through the urethra. The next day after this was told to the mother she was taken to Dr. J. B. Lewis, of St. James, who examined the young girl by the aid of a sound and diagnosed a calculus.

He used a dressing-forceps and tried to remove it per urethram, but found that it slipped off; and in his opinion it was too large to come out that way. He referred the case to me and on the following morning she was admitted to Inman Hospital, and after the usual preliminary preparations she was sounded, and the diagnosis of Dr. Lewis was corroborated.

An attempt was made to remove the foreign body per urethram, but it was easily seen to be too large. Suprapubic cystotomy was made, and the stone, illustrated in the accompanying photographs, (Figs. 2 and 3) was removed. It will be noted that the hairpin occupied the middle of the stone from end to end.

The vast majority of foreign bodies found in the female bladder are introduced accidentally. Foreign bodies may enter the bladder by perforation from the intestine.

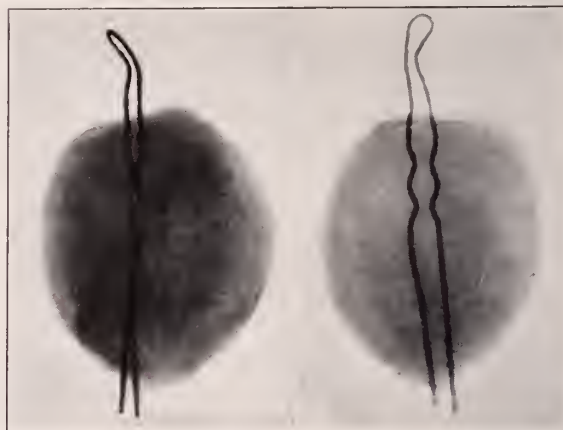


Fig. 2. Photograph of the stone showing the hairpin embedded in the stone.

ENCrustATION

There is a process of some interest in the history of foreign bodies in the bladder. After a period of time after the entry of the foreign body, successive layers of urinary salts may deposit on it. These result in a calcareous structure which gives the symptoms of an ordinary calculus.

It seems to be proven that calculi do not form without an amorphous deposit, but it has been shown that an organic frame-work is necessary. Schéde has shown experimentally that crystallization takes place through the colloids of the



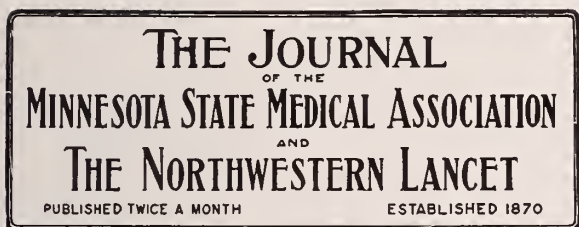
urine, which act as a nucleus for the crystalline deposit. Normal urine does not contain any colloid material that is capable of being re-dissolved after precipitation. Fibrinogen is produced by inflammation and is an insoluble and irreversible colloid, and will furnish the stroma for the formation of crystalline deposits of calculi.

It would then seem that a calculus is formed upon the encrustation of the foreign body. Sooner or later a cystitis is set up when colloids have been produced to serve as a stroma for the urinary deposits.

OBSERVATION

1. The diagnosis is made on enuresis.
2. Rectal bimanual examination should be made to reveal the identity of the foreign body.
3. Sounding elicits a grating sensation.
4. Radiography is valuable, but in my case it was not used because of the inaccessibility of the apparatus to the patient after she was admitted to the hospital.
5. Inspection through cystoscopy.

For the above I have drawn freely on a paper by L. H. Hirsch, in the *Journal of the A. M. A.*, October 22, 1910.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

MARCH 15, 1911.

NOTICE TO SECRETARIES—PLEASE ATTEND

It will be necessary for all members of the Minnesota State Medical Association to renew their membership and pay their dues for the next year to their different county secretaries so that the roster for the next year will be in the hands of the State Secretary, Dr. Thos. McDavitt, on or before April 1st, or their membership will lapse. This is very important at present owing to the medical defense feature, for a lapsed membership necessarily destroys any chance, for the time being, of defense by the State Association.

The by-law in reference to this matter is very stringent.

The medical defense department in the State Association has had a good moral effect, and the cases brought up have been ably and satisfactorily handled.

Mr. Secretary, will you kindly advise your county and district society members to pay up?

ANONYMOUS LETTERS

THE JOURNAL-LANCET is the recipient of an unsigned letter attacking the publication of an article by a man who, it is asserted, does not stand well with his fellow practitioners. No fault was found with the reading matter of the article, but THE JOURNAL-LANCET was ridiculed for publishing the same because of its author.

We do not desire to print articles from men who are not a credit to the profession, but an error of judgment or lack of knowledge of a writer's qualifications cannot always be charged as a discredit to the editor.

It seems strange, too, that a reputable medical man who wishes to criticise his fellow man should hesitate to sign his name to a communication. Unless the writer has the courage of his convictions the editor cannot accept his letter in good faith. The editor of a medical journal needs information, and it must come from members of the profession. Why not?

Since the above was written, we learn that the writer of the article referred to, holds an important official position in a district medical society, and this is sufficient comment on our anonymous letter.

FIGHTING MEDICAL BOARDS

Dr. Wm. T. Stone, a homeopathic physician and a member of the house of representatives from Park Rapids, Minn., has constituted himself a medical belligerent.

He first attempted to delay the appropriation for the University and now makes charges against the State Board of Health and the State Board of Medical Examiners. Both of these Boards are charged with the misuse of State funds, and, incidentally, Dr. Stone is venting his spleen on Dr. H. M. Bracken, the executive officer of the State Board of Health, from personal motives entirely.

Some time ago, if memory serves the editor right, Dr. Stone of Park Rapids disregarded the local and State Health Boards' orders, and later when he became health officer he was inefficient and failed to report to the State Board of Health. Scarlet fever and typhoid fever were his stumbling-blocks; perhaps he considered them unimportant. At any rate he is after the medical boards. He berates the fact that the State paid for meals served members to the State Board while in session. One wonders whether he knew that most of the meals served the members of the Board were at the Capitol Cafe?

When Dr. Stone further arraigns the executive officers with charging cigars and tips to the State he does not know what he is talking about, for the members of the Board pay for their own "smokes." Dr. Stone is much concerned about how the \$60,000 (actually \$53,000) is spent for the health of the State.

If he studied the question a few moments he might find out. Does Dr. Stone know that the members of the Board, other than the executive officer, receive no per diem and have not for years?

One serious charge against the Board of Medical Examiners is that a physician was barred from practice by the Board for having stock in a medical company, and was finally reinstated by paying the Board \$400, which was divided among the members. A serious charge and a libelous one, if not true.

If Dr. Stone's statements are no more convincing than some of the charges he makes, his word will not carry far. When a man of Dr. Stone's caliber gets into the legislature it is a pity he cannot do some good for his community or the State.

His vindictiveness is childish, and his over-reaching propensities will bring him into disfavor among his associates.

A new bill has been introduced into the legislature to do away with the present State Board of Health. In the bill it is proposed that where new appointments are to be made the complexion of the Board will be entirely changed. Ultimately, if the new bill passes (exceedingly doubtful), the Board will consist of three physicians, three civil engineers (not sanitary engineers), two plain citizens, and one lawyer.

Of such stuff are dreams made, but while the dreamer dreams that he is dreaming a dream, why cannot he dream something new and original?

THE VINDICATION OF MOLLAN'S HOSPITAL

Miss Ada Mollan, who conducts a private hospital in Minneapolis, was recently arrested on a warrant from the City Building Inspector's office, charging her with managing an unsafe building and confining patients in rooms that contributed to the hazard of fire.

Some time ago the fire department inspected the building and pronounced the boiler-room unsafe. This was remedied by an asbestos roof and sides and otherwise made safe and satisfactory to the fire-marshal and the building-inspector, but the latter insisted that wire screens and wire doors made the building unsafe. The case was tried before Judge Waite, who, after hearing the evidence, promptly dismissed the charge and relieved Miss Mollan.

It was shown that the ordinary hazard from fire was removed, and it was shown that for the treatment and protection of the insane the windows and doors must be retained.

In spite of this showing, the building inspector insisted that both screens and doors be removed. This proposition was absurd, and it looked as if the officer was persecuting instead of prosecuting. At all events, the hospital, the only one of its kind in the State, continues to care for the insane who come from the Dakotas and Minnesota and who do not care to go to a State hospital. The hospital has a good record for care, attention, food, and protection. It also receives and cares for many poor people who are temporarily disturbed. It is also under the jurisdiction of the State Board of Control and is designated by them as the detention hospital of Minneapolis.

It is rather strange that the building inspector selects this hospital, a two-story building, for a test case, and seemingly overlooks apartment houses, boarding-houses, and large business blocks.

The recent fire in the Syndicate block showed a deplorable construction, which, when ignited, burned like a tinder-box. The fire department succeeded in rescuing many sleepers from the building in spite of the fast-burning structure.

A test was made at Mollan's in the presence of physicians and of representatives of the fire department which showed that sixty locks upon screens and doors could be unfastened, and all the patients, fourteen in number, when the test was made, could be taken to the four exits in two and one-half minutes from the time the gong was sounded. The bell called three night nurses from the nurses' cottage, and the whole building was emptied before the fire department could have reached the place.

The newspaper hysteria circulated over the country the condemnation of the hospital, and only one paper, the *Minneapolis Journal*, had the justice to publish the vindication in equally bold lines.

No one need fear that every precaution will not be taken to insure the safety of patients at Mollan's hospital.

PRESIDENT VINCENT AND MEDICAL STANDARDS

When an Associated Press dispatch, a few days ago, told the country that the president-

elect of the University of Minnesota had spoken, before an association of leading medical men in Chicago, in favor of lower standards for graduation in medicine, the medical men of Minnesota were aghast. Almost the exact words contained in the dispatch were, in fact, used by President Vincent, but it is fortunate that his speech was delivered from manuscript, and with the manuscript before us we again learn the lesson of the danger of taking words out of their proper relationship to other words.

Dr. Vincent is in favor of the highest possible standards. He looks upon the medical profession as a form of social service, and upon doctors as social servants. As such he would have them the very "elite, recruited from the widest area of possible ability." As a social democrat he recognizes the danger that the increased standard of ability and training might limit the field of choice to the rich, who alone could afford the expense of preparation. To obviate this condition, he would have the State, for its own protection, provided the means for this long and costly preparation.

The standards of the University of Minnesota will not be lowered under President George E. Vincent, in the medical or any other department.

DEATH OF DR. W. W. MAYO

The father of the famous Mayo Brothers, Drs. W. J. and C. H. Mayo, died at his home in Rochester, Minn., Monday, March 6, 1911. Had he lived until May 31, 1911, he would have been 92 years old.

His familiar figure at the offices of the Mayos had been the subject of general remark by many visiting physicians and surgeons who attended the clinics there. To see him there and to note the courtesy and respect paid him by his loyal and loving sons gave one the impression that the responsibility of the great work of the office rested on his shoulders. In a large measure this was true, even though he had done no work among patients for years.

Dr. W. W. Mayo was an important man in the early days of Minnesota, and from him with his sturdy health and his capacity for work his sons inherited many of their sterling qualities. He instilled into them the fundamentals of the practice of medicine, the practical and the humane side; and they, from their education and environment, perfected an organization that is unequalled anywhere.

Dr. W. W. Mayo was born in England, and in the early fifties moved from Laporte, Ind., to Le Sueur, Minn. In 1863 he moved to Rochester where his sons were born.

In 1873 Dr. Mayo was elected president of the Minnesota State Medical Association, an office which has since been occupied by each of the sons. For fifty years he has been a member of the American Medical Association and has always been interested in its progress.

Dr. Mayo was called an old-time physician, but a remarkably successful one, and he had for his confreres many other old-time practitioners who left an impression on medicine in the State.

Dr. Mayo found time to enter politics and for years was a factor in the Democratic party of the State of Minnesota. He was persistent and diplomatic, and made friends wherever he went.

Rochester and the Minnesota State Medical Association, the Minnesota Valley Medical Society, the Olmsted County Medical Society, as well as the Southwestern Society, will miss a genial man, a warm friend, and a man whose popularity has not been equalled.

A SUSPICIOUS NORTH DAKOTA MEDICAL BILL

During the closing hours of the North Dakota Legislature, with the clock turned back several hours, a number of bills were rushed through regardless of safety or merit. It has been reported that about two hundred bills were railroaded through the legislative chute in a little more than two hours. It is not strange that House Bill No. 436 was one of the many. Evidently, the bill had been hastily prepared and not very carefully digested. To the ordinary laymind it seems unconstitutional on its face. No similar bill can be found anywhere in the United States, and surely no righteous judge would hesitate to condemn it after a single careful reading.

North Dakota is credited with two good bills, one the Pure Food Law, which passed the legislature two years ago and has been held up as an example for other states, the other bill, a medical-practice act, which was introduced and passed at this session, is a remarkably good bill.

The bill under consideration which awaits the approval or disapproval of the Governor, has an innocent look upon its face, but when carefully

considered it shows many dangerous expression-points.

Sections 1, 2, and 3 are unobjectionable. Section 4 shows the beginning of the burden of taxation which many hospitals cannot afford.

Sections 5 and 6 contain the objectionable matter, which means danger and dissension.

If the bill becomes a law and is constitutional it will create no end of trouble for both the surgeon and patient. No surgeon or doctor is expected to be infallible, and the courts have held that when a physician uses ordinary skill in the treatment of his patient he has done all that is expected of him. In this the courts protect him from malpractice suits, as well as clear him of ulterior motives in the care of the patient.

It is not fair to demand that a surgeon should give his reasons or define the pathological conditions in writing before he performs an operation. Many of our best surgeons are conservative and frequently decline to give a positive opinion either as to the pathology of the case or the results of the operation until they make an exploration. This, in conjunction with an approval slip signed by an independent outsider, means publicity of the patient's condition, which should be considered sacred. The probability of opposition by an unfair mind exists, and thus doubts and difficulties are created that should not be introduced to lay people untrained and unprepared when life or comfort is at stake.

Section 6 demands the presentation of the removed specimen, and even though the case is inoperable, the removal of a specimen is mandatory, even when a wise surgeon may deem it unwise to remove the smallest section of diseased tissue although he might like to subject it to laboratory analysis. This Section (No. 6) would burden the work of the directory of the State Public Health Laboratory to such an extent that it would be an impossibility to comply with the law.

The publication of the clinical history of the average surgical case is a breach of privilege, and would be objected to by patient and friends.

To expose the results of sin or accidents of a private nature is unreasonable, unjust, and cruel.

Sections 5 and 6 of this bill are bad, and would place physician and patient in a ridiculous light before the profession and the public.

The passage of the bill and the approval of the executive would drive surgical cases out of North Dakota into other states where the patient and his friends would expect to find fair-

ness combined with courtesy and the respect of confidence that must always exist between patient and physician.

If the bill were simply aimed at unskilled and unscrupulous surgeons who operate for the sake of cutting and a fee, and where the preservation of life was not carefully considered, there might be some virtue in the measure, but as it is the bill is vicious, and it is to be hoped that the level head of Governor John Burke will promptly veto the bill and save North Dakota from ridicule and shame.

THE SPECTATOR

This is a good world we live in. The oldest story of its creation says that after God had finished it he pronounced it "very good." It may have had time to degenerate since then, but, counted by world periods, it was not very long ago that our Lord lived in this world, and that, we know, made it vastly better. Anyway, if we were to make a symposium of the testimony of the people who have done the most good in the world as to their estimate of it, it is safe to believe that they would pronounce it good. Such a testimony from those who have made a fizzle or merely a muss in the world, would probably not give our world so good a reputation. But when we go in search of the truth we usually do not consult the fizzlers and the mussers; we ask the successors.

A certain young business man who believed he had seen the world on all sides, once undertook to tell the Spectator that the city in which we lived was one of the vilest spots on earth. The Spectator thought it was the best city he had ever known. It seemed to him so full of clean, high-minded, likable people that he could not remember the names of all the people he would like to have made his friends. This young man looked down on the Spectator in scornful pity. "You come with me some night," said he, "and I will show you something to open your eyes." "You come with me to church some Sunday morning," the Spectator replied, "and I will show you something that will enlighten your eyes." Here is one thing the Spectator heard once at church: "What a man sees depends on what he looks for: what he looks for depends on what he is."

You look for the best and you will find lots

of it. Look for the worst and the worst comes in flocks and wipes its muddy feet all over you. The man who loves the best will chum with the best all the days of his life. The man who loves to burrow in the under-world will live in the under-world all the days of his life, and dying, will probably go lower. The man who makes a specialty of bats and lizards will not be an authority on birds and flowers. Life is just about so long at the longest, and in that short space there isn't time to look up everything on earth, and under the earth. The wisdom of life consists in using one's limited time to the best advantage; in filling it with the best sights, the best sounds, the best endeavor possible, and in rejecting the second best and the bad. Sometimes the good and the very good must be discarded for the best, because our carrying capacity is not equal to the sum total of all three. To go deliberately to see and hear things positively bad, for the sake of the seeing and hearing, is loading up our human bucket with garbage when we might have had Jersey cream. One cannot well carry certified cream and bacterial garbage in the same pail. What a man carries in his bucket depends on what he likes best. You have now and then met the moral-garbage man who hesitated not to open his bucket right before your face. Some such men are not discreet with their wares. The average worldly wise bad man will sit tight on the lid of his garbage-can while in the presence of the man who feeds on cream. Whether garbage or cream is opened in our presence depends much on our taste for the one or the other.

This rule does not operate with the physician and the missionary quite as it does with the layman. The physician is called to look upon much of the seamy side of life. He is commissioned by his calling to sew up some of the seams. When he calls at a home he is often taken to the family skeleton-closet and shown the whole skeleton. Too often it is not a sterilized, well-articulated skeleton, but a gruesome box of bones, more or less odorous and unclean. For all such rubbish he is supposed to be a professional leaden casket. The Spectator has known physicians who were unable to keep the lid of the casket locked, so full was it of dead men's bones. Such men are almost sure that the world is going to the dogs very fast in these later days. They think the laity see only the outer false crust of the world, and that they see the world just as

it is. Well, they don't. The regular order of things is health. Anything out of that order is disease. Sin is the world's disease, not the normal world.

A physician must see some evil the laity need not look upon; but the rule of conduct for the laity is still the rule for the physician. Hope, cleanness, aggressive decency inspire hope, cleanness, and decency in the atmosphere for some distance about us. The Spectator knows men who rarely, if ever, hear a smutty story, and never tell one. Men instinctively do not tell such stuff in their presence. Evil communications multiply among evil men like pigweeds in a potato patch. The mind of the upright man is antiseptic to such stuff. A mind packed full of good thoughts, good plans, and good intents is the poorest soil an evil seed ever fell into. Even a saloon-keeper will try to look like a wholesome citizen in the presence of a minister of the gospel.

It is obviously true that the man who does not believe in his goods makes a poor salesman; that the physician who believes that his patient is going to die is pretty sure to lose his patient; and that the man who believes the world is growing worse is not likely to make the world much better. But, after all, this world is the best one we ever lived in, and if we are here for anything it is to make it better. Now, why should a good Creator want a man to tackle a hopeless job? The job is not hopeless. The world is good and it is growing better. Medical science is making good health contagious. Good morals always have been contagious.

BOOK NOTICES

PRIMER OF HYGIENE. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia, and Joseph S. Caldwell, Professor of Biology, George Peabody College for Teachers, Tennessee. Illustrated by Karl Hassmann and Hermann Heyer, Yonkers-on-Hudson, N. Y., 1910, World Book Company.

This is a small book designed to teach physiology and hygiene to school children, but it is so constructed that many teachers using it would over-emphasize anatomy and physiology.

The chapters on "Food Values," "First Aid," and "Habits," are particularly commendable.

The chapter devoted to exercises for the school-room is excellent so far as it goes, but it is too brief to be adequate.

PRINCIPLES OF PUBLIC HEALTH. A simple textbook on hygiene, presenting the principles fundamental to the conservation of individual and community health. By Thos. D. Tuttle, B. S., M. D., secretary and executive officer of the State Board of Health of Montana. Yonkers-on-Hudson, New York, 1910, World Book Company.

A most excellent little book of 187 pages, designed for the teaching of personal, home, and municipal hygiene to school-children.

It might well be read by physicians, especially those working under country conditions. Moreover, it presents the alcohol question in an honest way, rather than giving the demonstrably false teaching so long persisted in.

PRACTICAL MEDICINE SERIES. By G. P. Head, M. D., and C. L. Mix, A. M., M. D. Vol IX, Skin and Venereal Diseases and Miscellaneous Topics. By W. L. Baum, M. D., and Harold N. Moyer, M. D. The Yearbook Publishers, Chicago, 1910.

This is a book giving a résumé of the literature of the year, and is of interest to the general practitioner more than the specialist. It is the usual report of cases, some of interest and others not so interesting. The section on syphilis has a discussion on the Wassermann reaction and an up-to-date account of the action of salvarsan, the editors taking a fair and impartial stand on this question. The résumé of an article by L. Pick gives the following as indications for salvarsan: malignant syphilis and the obstinate affections of the mucous membranes. The relation of salvarsan to preventive treatment is also discussed. The miscellaneous part has several articles of interest on the early history of medicine, the early use of mercury, the early American hospitals, and an excellent article on medical practice in China.

INTERNATIONAL CLINICS. Volume IV. Series 20, 1910. J. B. Lippincott Company, Philadelphia and London.

The fourth volume of this excellent quarterly measures up to its predecessors in the number of valuable contributions it presents. The articles are either short essays or reports of clinics and

cover a wide range of subjects. Some are too brief and lack the detail necessary to make them valuable. One frequently has the feeling that an interesting subject is but too lightly dealt with. A notable illustration is E. Scott Carmichael's article on "Acute Abdomen in Children, etc." It is probably difficult to overcome this fault where so much diverse material must be crowded into a limited number of pages. Barker's article on "Blood Examination and the General Practitioner" should be extremely valuable. The general practitioner should welcome it as a guide in the maze of modern hematology. Haberman's article on "Hypnosis, etc.," in the chapter on neurology is fascinating. In the chapter on "Diagnosis and Treatment" Cattell gives a minute and very good description of the technique of giving Salvarsan. Under "History of Medicine" Walsh contributes an interesting article on "Physicians' Fees Down the Ages." The volume contains a number of good illustrations and a fair index.

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Town and Country Club, St. Paul, Wednesday evening, March 1st. Vice-president, Dr. J. L. Rothrock, presided over the business session. Following this Dr. Archa Wilcox reported a case of syphilis which had recently come under his observation. There had been a primary sore on the tonsil and general symptoms in December, 1910. The patient had been treated by a physician for quinsy at that time, although he had a macular eruption at the time. When first seen, on February 11th, he had lost forty or fifty pounds in weight, and had not eaten solid food for eleven weeks. The left palate was necrosed and eaten away, and he had rupia on the legs. He was given six decigrams of salvarsan, subcutaneously, under the scalp. This was done on Saturday. On Monday following he was able to eat a chicken dinner, and at the present time he is very greatly improved in every way.

Dr. A. Schwyzer cited a case of sore throat, which the physician in attendance had diagnosed as diphtheria, and had given antitoxine. Shortly after a rash had appeared, which was said to be due to the antitoxine. A few months later this

patient had come to him for an operation for gall-stones. Noting a copper-colored rash anti-syphilitic medication was administered, and the rash promptly disappeared. At the operation a quantity of mulberry-like stones were removed. There was a thickened condition of the middle portion of the pancreas, which it was thought best to leave alone. Some time later the patient in vomiting threw up a large piece of pancreas, which had ulcerated and broken through the stomach-wall. Apparently a good recovery has followed this occurrence.

Dr. E. M. Lundholm reported that he had recently administered "606" in a bad case of psoriasis, and it was followed by the best cure he had ever seen. In another case he had administered it for actinomycosis, and the patient is certainly improving. He does not know, however, whether it will prove a cure.

Dr. E. J. Abbott, of St. Paul, then read his inaugural thesis entitled "Feeding in Typhoid Fever."

Immediately following this, Dr. Paul B. Cook, of St. Paul, read his inaugural thesis, "The Present Status of Functional Kidney Tests."

The theses were discussed by Drs. Christison, Ramsey, Cates, Nippert, and Rees, with some remarks by Dr. Abbott and Dr. Cook in closing.

ARTHUR W. DUNNING, M. D., Secretary.

GOODHUE COUNTY SOCIETY

At the annual meeting of the Society, held at Red Wing on January 2d, papers were presented by Dr. A. T. Conley of Cannon Falls, on "Post-partum Hemorrhage, with Report of a Case," and by Dr. S. B. Haessley, of Red Wing, on "Floating Cartilage in the Knee-joint." Both papers were thoroughly discussed.

The following officers were elected: President, Dr. A. W. Jones, Red Wing; vice-president, Dr. J. V. Anderson, Red Wing; secretary-treasurer, Dr. M. W. Smith, Red Wing; censors, Dr. H. E. Conley, Cannon Falls, and Dr. F. W. Dimmitt, Red Wing.

M. W. SMITH, M. D., Secretary.

NEWS ITEMS

Dr. Nellie Barsness has moved from Duluth to Minneapolis.

Dr. H. E. McLaughlin, of Willmar, has moved to Cleveland, Ohio.

Dr. N. A. Nelson, formerly of Mora, has located at Clarkfield.

Dr. David E. Baird, of Carlyle, Montana, has moved to Miracle City, Mont.

Money is being rapidly raised by subscription for the new hospital at Glenwood.

Dr. Angus Macdonald, of St. Paul, has been spending the winter in the South.

The removal of Dr. G. C. Gilbert from Bovey leaves that place without a physician.

Dr. J. A. Slocumb has become associated in practice with his brother, Dr. H. H. Slocumb, of Elgin.

Dr. Ernest Sterner, of St. Paul, was married last month to Miss Elizabeth Frediane, of the same city.

Dr. B. T. Edwards, of Galesburg, Ill., has purchased the practice of Dr. Geo. H. Martin, of Ceylon.

Dr. Marius Hansen, of Hendrum, has decided to give up general practice, and locate elsewhere for special work.

Dr. F. H. Clay, of Shakopee, has moved to Winona to take up surgical work with Dr. E. S. Muir at that place.

Dr. Robert Earl, of St. Paul, has gone to Europe for six months. He will spend most of the time in London and Vienna.

Dr. C. D. Richmond, who recently moved from Brewster to Windom, has formed a partnership with Dr. L. Sogge, of the latter place.

Dr. E. M. Ganz has resigned his position on the staff of the More Hospital at Eveleth and gone to North Dakota for general practice.

Miss Anna Schollin, a graduate of the nurses' training school of St. Mary's Hospital of Minneapolis, has opened a general hospital at Willmar.

Dr. Henry Hannum, of Bayfield, Wis., celebrated the 30th anniversary of his practice in that city last month, and many friends extended their congratulations.

Dr. William W. Mayo, of Rochester, died on the 6th inst. at the age of 92. Further notice of Dr. Mayo's place in the profession appears in our editorial columns.

Dr. W. E. Richardson, of Slayton, has sold his practice to Dr. Edward W. Senn, of Currie.

and has moved to Heron Lake and become associated with Dr. Moe in hospital work at the latter place.

Beach, N. D., is to have a hospital. Misses Amelia Swanson and Hanna Peterson, trained nurses of St. Paul, with the help of physicians and others at Beach, have purchased a residence property to be used for the hospital.

A bill in the Wisconsin legislature requiring that school medical inspection be done only by physicians holding certificates to practice, is meeting strenuous opposition from the League of Medical Freedom and the Christian Scientists.

Arrangements will probably be made so that medical men from this section can go to the June meeting of the A. M. A. at Los Angeles in special cars and join at Kansas City the special trains carrying the physicians from Illinois and Iowa.

Drs. Dixon, Fox, and Rucker, of the Department of Health, of Pennsylvania, announce, in a circular letter, that they have found a new organism in the blood from acute cases of poliomyelitis which may be the etiological factor in the causation of the disease.

The Blue Earth County Medical Society is endeavoring to get for Mankato a detention hospital for contagious diseases. It would be interesting to know how many such apparently indispensable institutions exist in Minnesota in this year of grace and enlightenment.

The Cass County (N. D.) Medical Association held at Fargo last month the largest meeting in its history. Dr. G. N. Williamson, of Grand Forks, read a paper on "Rheumatic Manifestation in Children." Dr. Rowe of Casselton and Dr. Patterson of Edinburg, were also visitors.

The Psi Chapter of Alpha Kappa Kappa held its annual banquet in St. Paul last month. Dr. Paul B. Cook acted as toast-master, and toasts were responded to by Drs. Arthur Sweeney, W. D. Kelly, J. Clark Stewart, R. O. Beard, E. S. Geist, S. E. Sweitzer, W. H. Condit, and William Aurand.

The appropriation committee of the N. D. senate has recommended that \$25,000 be given the State Tuberculosis Sanatorium, and the members of the committee made individual subscriptions amounting to \$400, and it is believed that

much more will be raised by subscription. This is admirable.

Gov. Norris, of Montana, has appointed the following Montana physicians to prepare the State's exhibit for the Congress of Hygiene and Demography to be held in Washington in September: Dr. T. D. Tuttle, Helena; Dr. W. F. Cogswell, Livingston; Dr. C. E. K. Vidal, Great Falls; and Dr. F. D. Pease, Missoula.

Ward County, N. D., of which the important city of Minot is the county-seat, has closed its hospital and sold the fixtures. This was done because of the large expense of conducting the hospital and because the North Dakota law does not require a county to maintain a hospital. Private individuals can do such work much better.

"Dr." Henry Wuerzinger, of Minneapolis, the founder (so self-styled) of the Minnesota Association of naturopathy, was tried by his brethren for practicing without a license. He attributed his "persecution" by his brethren, mark you, to the fact that he introduced a bill in the State legislature to rid the "profession" (of naturopathy?) of quacks (regular or naturopathic?). He was fined \$50.

In a recent issue we published incorrectly the list of officers of the newly organized Minnesota Academy of Ophthalmology and Otolaryngology. They are as follows: President, Dr. H. McL. Morton, Minneapolis; first vice president, Dr. J. F. Fulton, St. Paul; second vice president, Dr. Thos. McDavitt, St. Paul; secretary-treasurer, Dr. E. H. Parker, Minneapolis; council.—Drs. F. E. Burch, Frank C. Todd, and W. N. Porteous, C. N. Spratt, Minneapolis, and Dr. H. A. Beaudoux, St. Paul.

The St. Louis County Medical Society suggests to Duluth that the city put a sanitary engineer at the head of the health department. The *Herald* gives the suggestion strong editorial endorsement. It is gratifying to note, as has been done in our columns from time to time, the space given in the Duluth daily papers to the subject of health measures. Intelligent discussion of public health matters appears more frequently in the Duluth press than in any papers with which we are acquainted.

A bill has been introduced into the Minnesota legislature requiring a fee of \$500 from itinerant physicians, and giving the Board of Medical Examiners power to cancel any such license for sufficient cause. Another bill has been intro-

duced providing for a "board of non-medical examiners," the board to examine and license all who practice "drugless systems of healing," excepting the mental healers. We shall look anxiously for a board for the mental healers, and all other boards of which the people stand in so great need.

A reception and banquet was tendered to Dr. Bruno Jaehnig at the Y. M. C. A. parlors by the physicians of Red Wing on February 20th. The occasion was the seventieth anniversary of his birthday. Every physician in the city was on the list of hosts and the special guests were Dr. Chas. Hill, of Pine Island, and Drs. A. T. and H. E. Conley, of Cannon Falls. Toasts were responded to as follows: "Our Guest Whom We Honor," Dr. A. T. Conley; "The Doctor as I Have Known Him," Dr. G. C. Wellner; "The Doctor as a Man," Dr. J. V. Anderson; "Our Special Guests," Dr. M. H. Cremer; "The Doctor as a Good Fellow," Dr. L. E. Claydon; "The Pioneer Physician," Dr. M. W. Sweeney; "The Humorous Side of Medicine," Dr. H. L. McKinstry; "The Doctor as a Citizen," Dr. M. W. Smith; "The Doctor's Fees," Dr. A. W. Jones. Dr. F. W. Dimmitt acted as toast-master, and, after the responses to the toasts, presented Dr. Jaehnig with a handsome Morris chair. The evening was notable for the attendance of every physician of the city able to be present. The only one absent was the venerable Dr. A. M. Stephens, who was confined to the house with paralysis. The entire evening was marked by the good fellowship prevailing and resulted in the formation of a Medical Club, having for its purpose the cultivation of a greater fraternal feeling among the members and for discussion of medical topics.

PHYSICIANS LICENSED AT THE JANUARY (1911) EXAMINATION TO PRACTICE IN MINNESOTA.

UPON EXAMINATION

Lovell, John Frederick (H) Boston Univ., 1908
Maynard, Carl Wesley Northwestern, 1910
Richardson, Florence A.
..... (H) U. of Michigan, 1895
Schatz, Francis J. Jefferson, 1909
Shelver, Henry J. Northwestern, 1910
Vigeland, Jorg G. Marquette, 1910

BY RECIPROCITY

Boteler, Wm. C. U. of Maryland, 1878
Chernausek, Samuel .. U. of Pennsylvania, 1910
Epperson, Paul Stenerson. Virginia, 1907

Flinn, Thos. Edwin, Rush, 1909
Johnson, Geo. L. Marquette, 1910
Kaufmann, Aloysius J. Bellevue, 1899
Parkinson, Lindley A. .. Columbus, Ohio, 1887
Patterson, Wilmot Edwin. Queen's U., 1906
Peterson, Roy Albert Keokuk, 1906
Plankers, Arnold Frederick Creighton, 1910
Raihala, John. Chicago Col. of M. & S., 1908
Rowe, Frank Noyes Iowa State U., 1906
Vercellini, Joseph Turin, Italy, 1895

PRACTICE AND HOSPITAL FOR SALE

I will sell my practice, which pays from \$5,000 to \$10,000 a year, with a 14-room hospital for the price of the hospital, \$5,000. The location is in a South Dakota town mostly of German population. Will introduce successor, who must speak German. I am obliged to leave as I have accepted a public position in a large field. Address H. E., care of this office.

PRACTICE FOR SALE

A \$3,000 unopposed medical practice with small drug-stock of about \$2,000, 10 miles to the nearest doctor or drug-store; population, Scandinavian, German, and Americans. Owing to illness I am obliged to quit practice. Address H. W., care of this office.

FOR SALE--STATIC ELECTRICAL MACHINE

A 24-plate, static electrical machine, with motor, rheostat, electrodes, and all appurtenances, with stand and platform in oak. A fine instrument in practically perfect condition. Cost, \$375. I will send it for \$100. Address H. S. M., care of this office.

ASSISTANT WANTED AT ST. PETER STATE HOSPITAL

Wanted: Junior Assistant; single; general hospital experience. Excellent opportunity for training in general medicine and pathology. Maximum salary \$1,000 a year, with board, lodging, and laundry. Opportunity for promotion. Address Dr. H. A. Tomlinson, Supt., St. Peter, Minn.

NEBULIZER FOR SALE

A high-grade nebulizer made by Wm. Boeckel & Co., of Philadelphia, and in perfect condition, is offered for sale very cheap. Outfit consists of large pump-tank, three bottles and stand for same. Price, \$20. Address or call upon F. H. Newton, 4405 Upton Ave., Minneapolis.

ASSISTANT WANTED

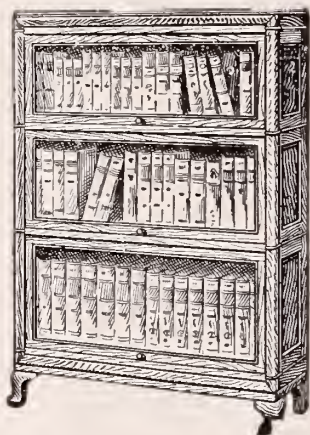
An assistant with one year's hospital experience is wanted by a firm of physicians in a city of 10,000 in Southern Minnesota. A salary will be paid the first year. This is a splendid opportunity to learn surgery. A Swede or German is preferred. Address C. J. R., care of this office.

PRACTICE FOR SALE

A \$4,000 practice in a farming town of 300, eighty miles southeast of the Twin Cities; Scandinavian preferred. Have for sale a driving outfit, and drugs and fixtures invoicing about \$800; only doctor. Want a good, reliable man to succeed me; am moving to city. Address S. L., care of this office.

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WE can furnish this beautiful Case in either of three finishes, viz., golden oak, dull mahogany or early English; also in three different widths. It is of generous capacity and very reasonable in price: viz., for either golden oak or early English, \$22.50, or for genuine mahogany, \$27.50.

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In our advertising pages, Messrs. Sharp & Smith, the well-known instrument makers of Chicago, give a picture of the instrument for treating cardiospasm, which was designed by Dr. H. S. Plummer, a member of the Mayo firm of physicians and surgeons of Rochester. It is highly creditable to the medical profession that when one of its members devises an instrument for ameliorating suffering or saving life, he not only does not patent it, but seeks to put it into the hands of an honorable business firm who will manufacture it in the best possible manner and offer it to the profession at a reasonable price. Dr. Plummer did both when he asked Messrs. Sharp & Smith to make and sell this instrument.

SPECIAL POST-GRADUATE WORK

The Chicago Polyclinic and Hospital announces in their usual card on another page their special spring course in surgery and other special branches.

For a number of years no other school in the country has drawn so many medical men from the Northwest as the Chicago Polyclinic, and it is quite certain that nowhere is better work done than in these special courses. They meet the needs of medical men, and attendance upon them is profitable.

SODIUM CACODYLATE IN SYPHILIS

Few articles appearing in the medical press in recent months have attracted more attention and comment than that by Dr. John B. Murphy, of Chicago, published in the Journal of the American Medical Association of September 24, 1910, in which the writer detailed the striking results obtained by him through the hypodermic administration of Sodium Cacodylate in the treatment of syphilis. Physicians who have not seen the article in question will be interested in the following abstract, as published in Therapeutic Notes:

"Administered in doses of $\frac{1}{2}$ to 2 grains hypodermically, its action was prompt and efficacious. Chancres became clean ulcers without induration in forty-eight hours; mucous patches cleared up in twenty-four to forty-eight hours; ulcers of the palate and pharynx healed in three to six days. In a child nine months old $\frac{1}{4}$ grain injected into the pectoral muscle caused a papillary syphilide to disappear in forty-eight hours. Two 2-grain doses, twenty-four hours apart, completely relieved the pain of a patient who suffered from active gastric crises (luetie) which usually lasted three weeks. An advancing perforating ulcer of the palate, which had resisted injections of $\frac{1}{4}$ grain of mercuric bichloride daily, promptly yielded to Sodium Cacodylate, two injections of $\frac{3}{4}$ grain each. The ulcer was healed in six days.

“Dr. Murphy suggests that Sodium Cacodylate be employed in primary doses of 2 to 4 grains, depending on the size and strength of the patient, and not repeated within three or four days unless there are special indications for it.”

Sodium Cacodylate, in sterile solution, is marketed by Parke, Davis & Co. in sealed glass ampoules containing $\frac{3}{4}$ grain and 3 grains, respectively, of the arsenic salt. In this connection it is proper to emphasize the importance of specifying a preparation that is known to be pure. Parke, Davis & Co. lay especial stress upon the purity of their product.

THE CALIFORNIA SANITARIUM

Many of our readers will go to California this year to attend the A. M. A. meeting. We suggest to all such that they make a special study of the climatic and other conditions favorable to the treatment of tuberculosis patients; and we commend to them as worthy of investigation the conditions at Belmont, where the above sanitarium is located.

Dr. Rothschild, the medical director, whose headquarters are in San Francisco, will be glad to meet any medical man who may be seeking information. His institution is 45 minutes' ride from the city, and is situated in a beautiful country with ideal surroundings.

Quarterly Notice.

**Farmers & Mechanics
Savings Bank**

Money deposited during March will draw interest from April 1st.

Money can be drawn out on March 29th, 30th and 31st without loss of interest for the quarter.

Interest will be ready to enter in pass books after April 11th.

Interest rate $3\frac{1}{2}\%$, compounded quarterly.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, APRIL 1, 1911.

No. 7

THE SELECTION OF OPERATION FOR INGUINAL HERNIA*

BY ARCHIBALD MACLAREN, M. D.

AND

HARRY P. RITCHIE, M. D.

ST. PAUL

This paper is founded upon the records of 105 anesthetics, showing 123 operations in 97 individuals. Eighteen cases were operated upon for double hernia. Two men and one woman returned for operation upon the opposite side from the original repair. Four men were re-operated on for relapse. Eighty-two operations were on men and twenty-three on women.

By decades the ages are as follows:

1st, 4 males and 1 female.

2d, 16 males and 2 females.

3d, 28 males and 7 females.

4th, 17 males and 6 females.

5th, 6 males and 2 females.

6th, 5 males and 3 females.

7th, 3 males and 1 female.

8th, 3 males and 1 female.

It may be seen that the greater number appear during the period of active life. Many have worn trusses for several years and accept the operation because of the occurrence of new symptoms or the failure of the truss to retain the hernia. In the series there are very few of the extreme conditions, and our experience with grossly complicated hernia is limited. In this fact lies the reason that no extraordinary measures, such as filigree, flaps of the recti, etc., were found necessary to obtain a satisfactory repair.

There are but five cases in the first decade. This is not entirely from lack of opportunity. In large hospitals doing charitable work the

operation may be routine. In private practice the child is under constant observation, and the necessity for the operation without the most positive indications is often questioned. A support is usually easily applied, and the child readily adapts itself to it. It is no odd experience to have the truss obliterate the sac, and when recurrence does come it will usually result in a less complicated form of hernia. The convalescence is more easily controlled, and, in fact, all conditions are more conducive to a favorable result. So far, we have yet to see or obtain a history of a strangulation of the inguinal hernia in the very young.

During the second decade and beyond, our advice is positive, as the presence of the hernia is then permanent. The exceptional cases in which a cure is obtained by injection or truss-pressure are very rare, and the permanency questioned. With men in industrial pursuits or in active life, and with patients of middle life with incarcerated or omental hernia or with symptoms of strangulation, the indications are positive; and in urging the operative repair our responsibility rests upon proper care and technic.

The patient who successfully controls his rupture, asks our advice. He is told of the dangers of strangulation and the permanency of the hernia without repair. It must be remembered, however, that this complication is only tentative, and in advising such a patient to operation our responsibilities are greatly increased.

Mortality.—Two deaths have occurred, both in strangulated hernia: one a case of four days'

*Read before the Western Surgical Society, at Chicago, December 18, 1910.

obstruction, and one an old man of 79, who, three weeks after operation, while sitting in bed, fell dead.

The total number of strangulations is eight. Three of these were in the third decade and the remaining five in the sixth and seventh. Our experience now justifies us in assuring our patients of their recovery from the operation.

Accidents of the operation.—The bladder was opened in one case, with recovery and clean wound. The vas was cut in a boy with a complicated congenital hernia. An attempt was made at repair; with what success is not known.

Complications of convalescence.—General: In one case the cord was constricted and the testicle swollen, with recovery. Another developed a severe pneumococcus bronchitis, with recovery. One other showed a temperature of 103°, for two days, without wound inflammation, which was undetermined as to cause.

Local: Seven have notes of wound infection such as a "few drops of serum," "wound-infection, upper end of wound, etc." One case suffered a severe infection discharging sloughs and undergoing a tedious convalescence. This was a double herniotomy where the sides were repaired synchronously by two operators. The right healed primarily while the left was unclean. Since this experience the operators have always worn masks. All cases suffering an inflammation to any degree whatever are instructed particularly as to the possibility of recurrence, as such processes in any wound may nullify the strength of the union.

Other operations.—The question of performing other operations at the same time as herniotomy is a frequent problem. The indefinite abdominal pain and distress is often the chief complaint, and when this occurs in a well controlled hernia it is well to remove the appendix. This has been done five times through a separate wound. Six years ago it was found that, by extending the incision in the external oblique high enough, a button-hole could be made approximating the cross muscle opening, through which the appendix can be readily removed. This has been done in 21 cases. Often it may be reached through the sac itself. In one case a herniotomy and a cholecystectomy were done the same time.

Double herniotomy.—Two cases returned within a year, showing a hernia developed on the opposite side. Such occurrences suggest a careful examination for incomplete hernias, which

only need the added abdominal pressure to make them definite. The cases of double herniotomy have as easy a convalescence, and there is no reason why the side opposite should not be investigated and the hernia in its inception cured.

Relapses.—The permanency of our work is the great question, for upon it lies the justification of advising our patients to submit to the operation. In women the problem of the disposition of the round ligament is unimportant in relation to the cure of hernia. Here the operation should be called a herniotomy, and is not to be placed to the credit or discredit of any of the well-known methods. When a relapse does occur it must be the result of some operative fault or complication of convalescence.

There is a record of six relapses. In 25 operations on females there are 2 recurrences; in 98 operations on males there are 4 returns; of these 98 operations there is listed, 1 Halstead with cure, 55 Bassini with 1 return, and 42 Ferguson with 3 returns. All such reports of success and failures are open to criticism, as there may be other failures of which there is no report made to us. But the above is probably correct, as we have had no general hospital service and the relationship between a private patient and his physician is certainly more intimate. Especially in the last few years the patients have been assured of proper care if there appears any sign of relapse.

Operative technic.—That employed has been along lines generally accepted and proven efficient in the hands of surgeons of wide experience. We have felt unjustified in attempting original or odd procedures, and we believe that high removal of the sac, expert approximation of tissue, gentle manipulation, a clean and a dry wound, are as essential to success as the use of the many accessory procedures. Of these that are in most constant use is the imbrication suggested by Dr. Andrews. In all cases absorbable material was used: Kangaroo tendon, Ramsey County pyoktannin, and chromicized catgut; yet in these days of reliable sterilization, less returns may result from the use of a permanent suture.

Selection of operation.—The great problem of repair is the disposition of the cord. The Halstead was performed in October, 1904. This patient, a young man, fired an engine for five years, and now sits at the throttle. Previous to 1905 there were two cases in which, from their description, the cord was not displaced, but in

all others, 34 in number, a Bassini was done. At this time one relapse had been re-operated upon, but the remembrance of the technic of the first operation was such that the failure was ascribed to this, rather than to the principles of the operation. In this case the hernia returned at the internal oblique ring, and the conditions the most positive in surgery, and there was no found were similar to the first operation. It was in 1905 that the operation for herniotomy was need of change in technic. The high position of the internal oblique had been many times noticed, and the stitch above the cord used when indicated. Since our return, and others reported following the Bassini always occurred at the internal ring, it seemed plausible that, if this opening was closed, a cure was guaranteed.

The supporting facts and reports of successful results influenced us in the use of the Ferguson as a routine procedure, beginning in February, 1905, and ending in January, 1909. This was done 42 times with 3 returns which have been re-operated upon.

The first to appear was the man who suffered from the severe infection of the left wound. It was considered that the cause lay in this experience, and it was expected to find that many of the tissues had been destroyed and a large defect present. No such thing occurred. The external oblique fascia was present in its usual strength, and the external ring was definite and so solid that it felt as though the opening were made with a punch. The external oblique was perfectly united to Poupart's ligament just as it was originally placed. No sac of the hernia could be demonstrated, so the whole wound was re-dissected and the abdomen opened through a button-hole. By placing a gloved finger within, a sac could be pushed out through the most dependent part of Hesselbach's triangle, and displacing the cord outwards. When this was removed it was easily demonstrated that, if the tissue were replaced as before, this defect would be uncorrected, and there seemed to be no reason why the sac would not immediately recur. The only possible procedure was the use of the con-

joined tendon and the displacement of the cord, thus performing a Bassini.

Within the last year two similar cases have returned, but with this added interest, that they had healed primarily at the first operation. In the re-dissection the tissues were found exactly as sutured, so that there seems to be no question of operative fault, but one of principle.

The percentage of our success as to displacement or non-displacement of the cord, is in favor of the former. It is unnecessary to mention the facts and reasons given in favor of one or the other operations, more than to say that in our work it is constantly demonstrated that the most evident process in the formation of a hernia, is the shortening of the inguinal canal and the approximation of the openings. It is reasonable to consider that any measure which will over-correct this condition is most rational. The view of the formation of an entirely new kind of hernia, which comes without displacement of the cord and which we are powerless to prevent, has swung the pendulum back in favor of the Bassini, and our present feeling is that, if there is a recurrence from it, we will call it an operative fault and do it over again.

Such individual experience however, must not be considered conclusive evidence against the Ferguson, and we still believe that the principles underlying the Ferguson are reasonable, and the arguments in its favor valid. We have many cases in which a severe test of the operation has been made and they are still perfect.

Would it be too ideal to suggest that in the future, by experience and observation, a surgeon may reach that stage of perfection where he may select the procedure best suited to the conditions found at the time of the operation; that, for the sliding hernia of the sigmoid, he employ all structures to support the most independent points and do a Halstead; when the fascia beneath the inguinal canal is attenuated that he do a Bassini; and when the lower structures of the canal are strong and the defect is high that a Ferguson be selected, thus dispensing with routine methods, and reach the goal of our endeavors, namely, a success in every case?

THE GROSSICH METHOD OF SKIN STERILIZATION*

BY EMIL C. ROBITSHEK, M. D.

MINNEAPOLIS.

It is generally recognized by the medical profession that, for several reasons, our present mode of skin-sterilization, both as regards the surgeon's hands and the field of operation, is far from ideal. For this reason interest in the subject has been awakened during the last two years in Germany, and, more recently, in our own country, by contributions of surgeons in the medical press, extolling, in words of the highest praise, methods which tend to obviate much of that which we now find objectionable. These methods combine simplicity with effectiveness. due, in great part, it is claimed, to the fact that all washing and scrubbing with soap and water is absolutely and unconditionally prohibited.

Of these methods the Grossich has gained the widest popularity at the present time. It consists of tincture of iodine applied to the skin of the operative field, without any previous use of soap and water or other preparations. Grossich lays no claim to being the discoverer of the antiseptic property of iodine. The discovery was made in 1873 by Davaine, who, upon experimenting, found that a 1-12,000 solution caused the virulence of anthrax to disappear in thirty minutes. Thomas Bryant, of Guy's hospital, and von Popoff then began its successful use, in weak solutions, for the irrigation of suppurating wounds. Roux, of Luassane, followed shortly by Mikulicz, and, in 1898, by Nicholas Senn, was the first to use the tincture of iodine in hand-disinfection. Their method consisted in dipping the finger-tips in this solution, sufficiently to cover the nails, just prior to beginning an operation. Senn became more interested, and at his suggestion Kinnaman undertook experiments in which, among others, he found that a 1-200 solution of iodine would kill staphylococcus in five minutes, and that a 1-500 would kill the streptococcus in two minutes; and he arrived at the following conclusions:

1. That in a solution of iodine varying from 0.2 per cent to 1 per cent, we have a germicidal agent of very marked potency.

2. That a solution is easily prepared and is stable.

3. That its germicidal power is superior to bichloride.

4. That it is non-toxic and non-irritating.

5. That it does not coagulate albumen or form inert compounds with tissue.

6. That it is effective in a very brief time.

7. That it has marked penetrating power.

8. He believes a 0.5 per cent solution is strong enough for all practical purposes.

Cannady, in 1906, in speaking of iodine, concluded that iodine was the antiseptic par excellence for the skin in hand as well as operative site-disinfection; and although Dannreuther, again in 1908, spoke highly of applying a coat of tincture of iodine to the field of operation just prior to making the initial skin-incision, it was not until October of the same year that the special usefulness of the tincture of iodine as a skin-disinfectant was forcibly brought to the attention of the surgical world, when an article entitled, "A New Method of Sterilization of the Skin for Operations," by Dr. Antonio Grossich of Fiume, appeared in the *Zentralblatt für Chirurgie*.

In an experience of 700 cases of emergency wounds in laboring people, he secured healing by first intention in all, following the use of the tincture. He firmly insists, however, that in using the tincture of iodine as a skin-disinfectant, no soap or water must be used as a preliminary, for, if used, the results will not be as good. Microscopic examinations have shown him that the penetration of iodine is greater, and that the tissues take it up much more readily, when soap and water are not used. His explanation of this is, that the cells of the superficial layer of the epidermis are not in close contact, but that, on the contrary, they are loosely packed, and that intracellular spaces exist which communicate with the external air; that a washing or scrubbing with soap and water macerate and soften these superficial cells, make them swell, and in this manner plug the intracellular spaces, thus preventing the penetration of the iodine.

His method, as originally published, is as follows: While the patient is on the table, the field of operation is shaved dry, after which a 10 or 12 per cent solution of the tincture of iodine is painted over the field and allowed to dry. After

*Read before the Hennepin County Medical Society, February 6, 1911.

the patient has been anesthetized another application of the tincture is made and again allowed to dry. No other preparation of the skin is permitted. A third application is made to the skin-incision and the completed sutures, after which the usual sterile dry-gauze dressing is applied. He thus applies the iodine to all parts of the body and claims to have seen no deleterious effects where even as much as one-third of the body was so covered at one time. The few cases of blistering or dermatitis that he has seen following its use were in scrofulous patients. Professor König, of Altona, sounds a note of warning in the use of the tincture in such regions as the axilla, groin, scrotum and perineum on account of the resulting blistering or dermatitis, but Grossich insists that no alarm need be felt if the iodinated skin-surfaces be kept from coming in direct contact with each other. This can be prevented by gauze dressings or by washing the iodine off with alcohol following the operation.

His method at once gained a wide popularity, as evidenced by the many excellent reports from different clinics, each of them substantiating all his claims. At the International Medical Congress, held in 1909 at Budapest, the method was warmly recommended. Out of 400 cases of major operations at the surgical clinic at Turin, Donati had only one case of suppuration following the use of Grossich's method of skin-sterilization, and this one proved to be due to a deep silk ligature. At Sick's clinic at Leipzig, Streitberger reports on the excellent results attained in 1,000 minor and 200 major operations. He recommends it for its usefulness, especially in military surgery. Professor E. Unger speaks of 15 cases, among others, of diffuse peritonitis in which he secured primary healing in all by swabbing each suture-layer with the tincture. He, too, has become very enthusiastic. In the London Lancet of April 16, 1910, H. F. Waterhouse and W. S. Fenwick report 149 out of 150 cases healed by first intention. They used only a 2 per cent solution of the tincture in rectified spirits. J. L. Stretton, in 348 cases, including all kinds, has had only three failures. He has seen no cases of dermatitis, and in using this method he believes it entirely unnecessary to shave the skin. The same excellent results have been attained at von Eiselberg's clinic, where, in a series of 200 cases reported, not even a suspicion of infection has been seen.

There have been many slight modifications of

this method as originally published by Grossich, but the results have not been improved upon. Some surgeons begin the application of the tincture the evening previous to the operations; others apply as many as three coats at intervals of a few hours. Professor Knoke, director of the Marine hospital at Kiel, and Bogdan, both recommend the use of benzine as a preliminary to the use of the iodine. They report on the good results thus attained in over 1,000 cases. At König's clinic at Altona, the Grossich method has supplanted all others in skin-sterilization of the operative field. Since then a few other large clinics have followed suit, but up to date the method has not been as universally adopted as, in my mind, it should be. As yet surgeons find it difficult to make up their minds to do away with soap and water. In view of such a seemingly radical change the hesitation seems only natural, but it really cannot be justified by experimental or clinical evidence.

In my work and in that of my association with Dr. G. G. Eitel, I have seen the Grossich method or its modification applied to almost every part of the body. Our method does not differ essentially from others. We prefer to have the patient given a tub bath and shaved the evening before the day of the operation. When the patient is placed on the operating table we apply the first coat of the tincture, using the official tincture, allow it to dry, and after an interval of a few minutes apply the second coat, which is also allowed to dry. Very often we follow the application of the two coats of iodine with an application of alcohol. We find that this does not interfere with the skin-disinfection; on the other hand, it has a tendency to prevent blistering and removes the discoloration caused by the iodine, which is a disadvantage at times.

The only case of infection following this method I have seen was that following an operation for an ingrowing toe-nail.

I believe the Grossich method has been thoroughly tested with results that should make for its adoption in almost all surgical cases, for it embodies essentials which make it very near ideal.

Its advantages over other methods are:

1. Its simplicity.
2. Its reliability.
3. Its rapidity of application, thus saving time.

4. Its lessened injury to the skin itself.
5. Its cheapness and saving of gauze and other materials.
6. Protection of patient from exposure to cold and dampness.
7. Its tendency to cause healing by first intention.
8. Its possibility of quickly enlarging, if necessary, the operative field.
9. Its avoidance of rubbing where contra-indicated, as in ruptured tubal pregnancy, internal hemorrhage, diffuse peritonitis, etc.

Its disadvantages are few and trivial. These are:

1. Blistering and dermatitis.
2. Discoloration of the skin, making observation difficult in special cases, as in lupus, angioma and varices.
3. It seems to dull the knife-edge sooner than usual.

Iodine stains are removed by raw or boiled starch, peroxide, ammonia water, ether, and Fowler's solution.

FINKELSTEIN'S CLASSIFICATION OF DISEASES OF THE GASTRO-INTESTINAL TRACT IN INFANTS*

By F. W. SCHLUTZ, M. D.

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MINNEAPOLIS

Finkelstein divides disturbances of the alimentary tract into two divisions: (a) those in which all symptoms point simply to a disturbance in the process of digestion and food assimilation; and (b), those in which the symptoms indicate that there is some agent, other than the food ingested, active as the cause of the disorder. He styles the latter gastro-intestinal disturbance due to infection. The chief characteristic of such disturbance is definite evidence of inflammation and alteration of the gastro-intestinal wall and a rise of temperature which persists independent of the food ingested.

The first division is the one in which we are interested, and with which Finkelstein's classification deals.

Among the symptoms that more closely define or characterize this form of gastro-intestinal disturbance he names lack of or deficient gain in weight, vomiting, diarrhea, symptoms of general intoxication, and temperature-rises of varying degree. In regard to the nature of the toxins causing this rise of temperature, he has observed that there is a definite and constant connection between the temperature, the intoxication symptoms, and the food given.

Finkelstein holds that the gastro-intestinal disturbance, due to food alone, is the disturbance

"*ex alimentatione*," as he calls it, really only one disease, and the subdivisions he makes or the classifications deal only with different stages or degrees of the same malady.

To determine these different stages and analyze them, it is necessary, first, to determine in every detail the present condition of the child's nutrition, and, after that, to apply a test to the functioning-power of its alimentary tract. The functional diagnosis, as Finkelstein calls it, consists in giving the infant a definite quantity of food—a definite amount of work to do and in observing what variations from the normal occur in the metabolism of this food.

Finkelstein looks upon the reaction of the body to food as a complicated biological reaction. It is precipitated by the ingested food, which, after passing through a series of stages and phases finally ends with an increase of tissue-substance and the excretion of non-assimilable residue. Various symptoms indicate whether this process is going forward properly or not, among them are the temperature-reaction, the weight, the heart-function, the respiration, the nervous phenomena, the urine, and the behavior of the gastro-intestinal tract. The deviations of temperature are normally very slight—the "*Monothermia*," as Finkelstein calls it. The weight-curve should show a steady and regular increase. The infant should show a sufficient breadth or

*Read before the Hennepin County Medical Society, Dec. 5, 1910.

latitude of tolerance, which means that his ability to metabolize food properly should move within physiological limits. The limits of this physiological functioning ability or tolerance are, on the one hand, that at which the body is just metabolizing and assimilating enough food to compensate for the normal loss; and, on the other hand, that at which the organism will be injured by the food taken. Beyond either limit a loss of weight will necessarily ensue, either because not enough substance is taken in to make up for what is lost in metabolism, or because an excess of material over and beyond what the organism can take care of, is offered. The excess acts detrimentally, and, in direct proportion to its quantity, lowers the physiological maximum of tolerance. Finkelstein designates variations of these reactions from the normal or physiological as paradoxical or as the "paradox-reaction."

The degree of variation of these symptoms which Finkelstein lays down as characteristic for an infant with normal alimentary function, forms the basis on which he makes his classification.

He divides the alimentary disturbance into four phases. The first phase, the "*Bilanz Störung*," as Finkelstein calls it, has as its chief characteristic a

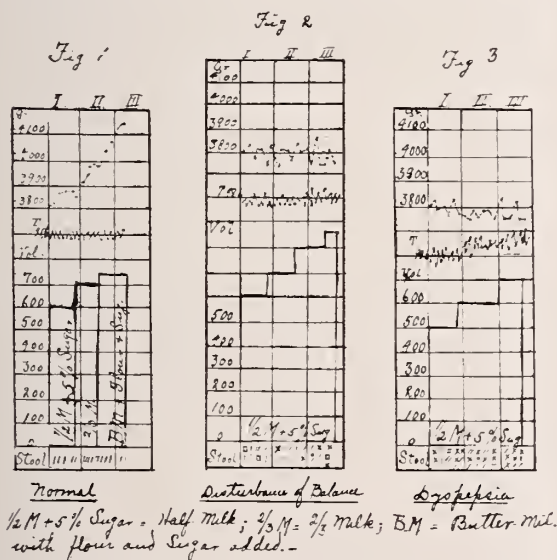
weight; on the contrary the first evidence of the paradoxical reaction begins to set in. The stools, while frequently normal, generally show a characteristic appearance. They are dry, hard, white, or grayish-white, due, as we now know, not to casein, but to soaps formed from the fat. The temperature-curve is disturbed. Instead of monothermia we now see daily oscillations above and below the normal line. The skin is pale, and the muscles flabby.

Finkelstein has demonstrated some interesting facts regarding the influence the various components of the food have on the course of the disease. Neither the quantity of casein given, nor the state in which it is given,—plain milk, butter-milk, or peptonized milk,—has any bearing on the course of the condition.

The carbohydrate-tolerance is good, although somewhat limited. There is a notable absence of fermentation in this stage. As Czerny has shown, fat is the food component which causes the trouble. Cutting the quantity down, or leaving it out of the food given the infant, and replacing it with an increase in the carbohydrate-component, relieves the trouble in a comparatively short time. We have here, indeed, a striking illustration of the paradoxical reaction. Fat has the highest caloric value of all food-components. By increasing it quantitatively in the food we could reason that a gain in weight should ensue. Here we see not only a loss, but no gain or improvement, in the child's condition unless the fat is practically excluded from the diet.

The disturbance of balance in its more advanced stage leads imperceptibly into the next phase, the "*dyspepsie*." This stage is foreshadowed by a beginning intolerance for carbohydrates.

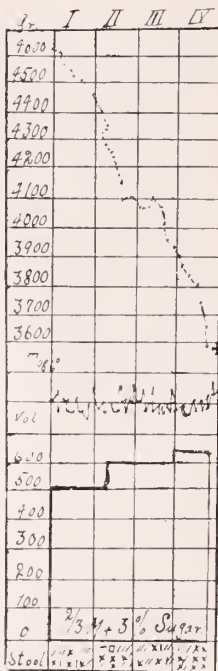
The dyspepsia is almost always a continuation of the disturbance of balance. Occasionally it may be precipitated outright by badly contaminated or decomposed milk. Generally it is the sequence of an advanced and aggravated disturbance of balance. The normal intestinal wall has a certain regulatory power by means of which its bacterial flora and chemical products are kept in a kind of interdependent combination. The disturbance of this regulatory power marks the transition of the first stage, the disturbance of balance, into the second, the dyspepsia. The chief characteristic of the dyspepsia is fermentation. The trouble is so far purely local, and is confined to the lumen of the intestine. The intermediary metabolism is hardly affected. The



gain compared to the food-value offered and consumed. This lack of gain in the face of sufficient, or more than sufficient, food persists over long periods of time. Increasing the food-components does not lead to an increased gain in disturbance in the end-balance of nutrition. By that is meant that the increase of tissue-substance shows a negative balance or at least, not enough

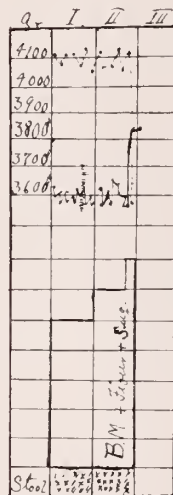
stage of "dyspepsia" seems like an interlude between the mild first form and the grave following forms. Its persistence ushers in a paralysis of function of the intestinal cell, which, as Finkelstein believes, paves the way for the pronounced symptoms found in the grave remaining forms. The principal symptoms of the dyspepsia are the diarrhea and the irregularity in the temperature and the weight-curve. Continuation or aggravation of the trouble is, like the disturbance of balance, again dependent upon the kind of food given and the relation of its various components. The tolerance for casein is undiminished,—a sig-

Fig 4



Decomposition

Fig 5



Intoxication

BM = Butter-Milk
with Flour and Sugar.

nificant fact well worthy of notice to those who still perceive in proteids the dangerous element of artificial food. The tolerance for fat is low, but it is notably low to carbohydrates, the various sugars, and, in somewhat less degree, the starches. The principle underlying the therapy is obviously the removal from the diet of the components capable of causing fermentation, primarily the sugar and the fat.

This, in connection with a stringent reduction in the amount of food given, will generally lead to early restoration of the normal health. If this does not follow, we are face to face with the third and, under given circumstances, with the

fourth form of alimentary disturbance, the "decomposition," as Finkelstein calls it, and the intoxication. The former is a process into which the *dyspepsia* may gradually and imperceptibly merge. The latter may intervene at any moment in a grave and aggravated *dyspepsia*. The former is slow and definite in its progress, the latter always stormy and rapid.

In either form there exists, to a varying degree, that paralysis of function of the cell which Finkelstein holds responsible for the production of symptoms of intoxication and of atrophy. Substances which in health entered the intermediary metabolism only when changed or properly prepared while passing through the sound intestinal wall, now enter the intermediary metabolism practically unchanged. It is to the action of these substances, in other words to the food given, that Finkelstein ascribes the toxic symptoms.

The third stage, decomposition, as Finkelstein calls it,—an atrophy in the strictest sense,—a disarrangement or decomposition of the characteristics of a healthy cell,—has begun when the loss of weight is persistent and continued. The daily loss may reach very large amounts. It continues until we see the classical picture of atrophy, or marasmus. The infants are irritable, cry a good deal, and appear ravenously hungry. The picture of the stools varies: at times they are normal; at other times dyspeptic or soap stools; sometimes, tar-colored from admixture of blood. The pulse is always slow; the respiration, slow and, in the later stages, irregular; and the temperature is generally below normal.

Sooner or later, as the tolerance for the various food-components sinks to a minimum, symptoms of intoxication will supervene. Sudden death is very common,—a frequent cause seems to be a general collapse or an acutely developed paralysis of respiration; and at times an intercurrent infection closes the scene, but not as commonly as we should expect.

As in the previous stages, so in the stage of decomposition, Finkelstein holds that the aliment is directly responsible for the symptoms. The infant is not losing weight in spite of the food given, but because of the food given.

The chief characteristic of the decomposition is a progressive lowering of the tolerance of the infantile organism for the food components. No matter how much we cut the food down and alter it so as to meet the extreme diminution in tolerance, we will constantly be confronted with the

paradox-reaction and will see loss in weight where we hope for gain. Breast-milk, which in all the foregoing stages and likewise in the more moderate forms of this one speedily improves things, will fail at this stage, no matter how small a quantity is given.

Finkelstein divides the stage of decomposition into three grades or degrees, using as a basis the general reaction to treatment, the particular reaction of the gastro-intestinal tract and the reaction which ensues when we attempt to resume increased feeding.

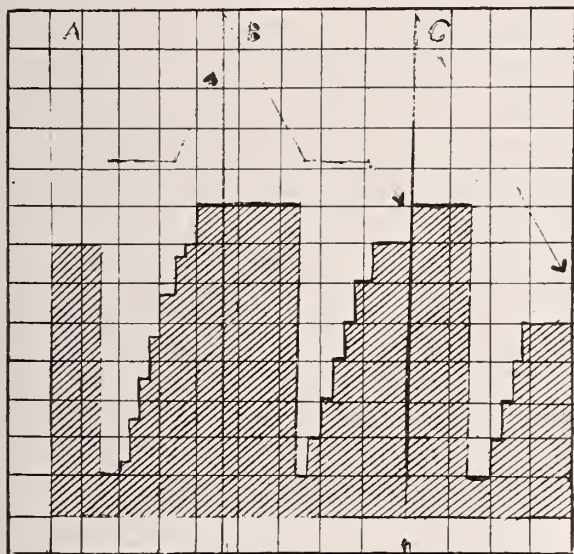


Fig. 6. Diagrammatic chart showing the three degrees of decomposition and the paradoxical reaction of the weight-curve when the food given exceeds the limit of tolerance.

The first degree embraces the milder forms, which are virtually only aggravated or prolonged *dyspepsie*. Radically cutting down the foods will, in a comparatively few days, cause a cessation of the exhausting losses in weight. It soon becomes possible to again increase the food. A return to health is possible by use of artificial food alone, if proper regard is had for careful dosage of sugar and fat.

In the second degree, cutting down the food will cause a cessation of the losses in weight, but it will take place more slowly. The stools are slow in returning to normal. Attempts to resume feeding, even with quantities far below the life-sustaining limit, will cause relapses and reappearance of all pathological phenomena. Artificial food will rarely do in these cases. Breast-feeding is about the only recourse.

The third degree, cutting down the food to the

extreme minimum, will neither cause a cessation of the weight-losses nor will the stools in any way become normal. Breast-milk is the only possible nourishment, and that will generally fail.

In connection with the therapy of decomposition Finkelstein sounds a note of warning in regard to a measure commonly applied in all forms of gastro-intestinal disturbances, and one which he advocates and uses freely in all the other forms described, namely, the twenty-four-hour starvation period, instituted before resuming any form of feeding. He has seen many cases rapidly grow worse and not infrequently die apparently in collapse. It is his custom to prescribe a limited starvation-period, generally twelve hours for all cases of decomposition beyond the first degree. For these cases Finkelstein believes also that breast-milk is the only really safe nourishment, and it must not be forgotten that even this in large improper dosage will not do. Only very small amounts must be given in the beginning.

For functional insufficiency, which is so pronounced a characteristic of the stage of decomposition, Finkelstein advances the theory that there is possibly a pathological state, a derangement of the normal combination and composition of the organs and tissues connected with nutrition. The loss of power of assimilation can be explained only by assuming that accompanying the cell-atrophy there is a simultaneous loss of substance, or at least diminished activity of substances, which guarantee a healthy metabolism only in their normal state. Diminishing these substances or rendering them inactive leads to grave disturbances of functions and eventually death.

There remains the fourth form, the intoxication. Finkelstein concludes from his observations that many forms of gastro-intestinal disturbance which heretofore were classed as separate disease, for example acute enterocatarrh, or its extreme type, cholera infantum, etc., are really only forms which fit into one large group which has a set of symptoms, some or all of which can always be demonstrated in all the different forms. He designates this collective group by the name of *intoxication*, and lays down nine definite symptoms which are characteristic and which enable one to differentiate this form from other diseases of the gastro-intestinal tract. They are clouding of the sensorium, change in the rhythm of breathing, alimentary glycosuria, fever, collapse, diarrhea, albuminuria with casts, and marked loss in weight and leukocytosis. The breathing is deep, without pauses, in many cases resembling the

breathing of coma diabeticum; at times it is the opposite, short, jerky, rapid, accompanied by moaning. The glycosuria is alimentary. Lactose and galactose are the sugars generally found.

The picture of the intoxication may vary. One of the symptoms may dominate the scene. Preponderance of diarrhea may result in one type, so-called cholera infantum. Predominance of the symptoms referable to the sensorium yields types resembling the hydrocephaloid state. There may be presented gradations from the slightest stupor or sopor to the deepest coma. Finkelstein's description of the physiognomy of an infant in the state of intoxication is classical. In the first stages there is languor or sopor, the eyes have a forlorn lost look, they seem fixed on something far away, the face is mask-like, the mimic muscles are in absolute repose, the movements of the child are infrequent, slow, and meditative, often resembling catalepsy. The skin is pale, slightly livid. There are slight shadows about the eyes. If the condition assumes grave proportions, the deepest coma varied at times with movements of wild jactitation may ensue. The face at times will appear blank, at times it is painfully contracted. Catalepsy is pronounced; there may be spasticity, even contractures, and local or general convulsions. Symptoms of meningeal irritation or evidences of paralysis may ensue; collapse is complete. The child presents an appearance such as we see in the gravest sepsis. Intoxication must be differentiated from decomposition. There are two cardinal differences, an absence of glycosuria and an absence of any form of clouding of sensorium unless we have an intoxication super-imposed on a *DeKomposition*, a condition which may ensue in the grave and final stages of *DeKomposition*, a mixed form as Finkelstein calls it. It must be differentiated from numerous infectious diseases. Practically none of them shows the above-described peculiar type of breathing or glycosuria. Coma diabeticum resembles intoxication closely, but it is a rare disease in infancy, and dextrose is the sugar always secreted, while in intoxication lactose or galactose is found in the urine.

Endeavoring to find and analyze the nature of the toxins which lead to this state of intoxication, Finkelstein was confronted again and again with the observation that there is a constant and definite connection between the intoxication symptoms and the food given. He emphasizes that an intoxication never occurs without being preceded by prodromes which foreshadow the

onset. The weight-curve is abnormal, and the temperature irregular. There is usually preceding it that stage of dyspepsia described earlier. The intoxication can be precipitated in this dyspeptic stage by increasing the amount of food given the infant or by changing the composition of the food, for instance, altering its fat or carbohydrate content. Both steps are procedures which make a demand on a tolerance which is already unequal to the task imposed upon it.

Sugar is the particularly dangerous component for the infant with intoxication, the soluble sugars more so than the starches and dextrines. Fat acts similarly to the sugar although apparently it is not quite so toxic. Casein is indifferent in its action. The milk sugar and fat contained in breast-milk can, in this condition, have exactly the same deleterious effect that cow's milk or other artificial food has.

Finkelstein believes that the intoxication is distinctly of alimentary origin. It ensues in an infant already harmed by preliminary alimentary disturbance the moment you give larger quantities of food or of individual food-components than its organism with an already damaged tolerance can at that moment metabolize. The nature of the toxins is not known. They seem to originate in the intermediary metabolism.

The fever of intoxication Finkelstein believes to be distinctly caused by food-components, and not by any intercurrent infection. He holds the sugar and the salts of the whey responsible. Finkelstein draws these conclusions from a striking observation which has constantly and consistently recurred, namely, that withholding all food and giving liberal quantities of unsweetened water, or water sweetened with benzo-sulphinide for twenty-four or forty-eight hours will invariably cause an alimentary fever to disappear. It can be directly differentiated from fever due to extraneous cause, i. e., infection, by this very test. The latter is never influenced by this therapy.

On the basis of the reaction to treatment the intoxication may, like the decomposition, be divided into three degrees. The starvation-period, or so-called water diet, will, in the first degree, cause the temperature to go down rapidly and all intoxication symptoms to disappear in twenty-four to forty-eight hours. The return to normal, and to normal tolerance for food, is rapid. In the second degree the return is much slower and frequently uncertain. The third degree is

extremely grave. Death is the usual outcome. It is the form we generally see supervening or complicating an advanced *decomposition*.

The condition of the infant preceding the onset of the intoxication is always the deciding factor in the prognosis.

The merits of the classification of Finkelstein are today the subject of discussion among the pediatricists on the Continent. Personally, I believe it will prove of great value and will mark one of the greatest steps toward simplifying our clinical conception of diseases of the gastro-intestinal tract in infants.

We may cite another evidence of the looseness with which the bill was drawn and of the

vicious character of what appears to be an innocent and salutary requirement. Suppose a surgeon operates, as all surgeons not infrequently do, upon a highly respectable woman for a condition which is the result of a venereal disease; and suppose such disease had been communicated to her by her husband. The existence of the venereal disease would be recorded, under this law, with the hospital superintendent. Now, suppose the fact became public, as might easily be the case, would not this surgeon have signed his death-warrant as a physician and surgeon, and possibly as a man? And would not the verdict of the jury, in the latter case, in any civilized or uncivilized community, be either justifiable homicide or "temporary insanity"?

SIGNS DETERMINING THE ACTIVITY AND LATENCY OF TUBERCULOSIS*

By E. L. TUOHY, M. D.

DULUTH

1. Speaking conservatively, from 70 to 90 per cent of all adults have been inoculated with tuberculosis. Three in 10 some time in their lives show active symptoms. Every third death between 18 and 45, and 1 in 10 for all ages, result therefrom.

2. The problem, then, is not to find out who is inoculated (use of sensitive tests, such as Calmette or von Pirquet, etc.), but to determine in whom the disease is active and in whom it is arrested. No short-cut has been evolved to secure this information which supplants careful history-taking, consideration of subjective symptoms, detailed physical examination, and observation of the patient.

3. *Definition*.—A possibly curable disease, if the patient heeds early symptoms, has an early diagnosis made of "pulmonary tuberculosis," and follows in detail for a long enough time the provisions of a cure. An incurable rotting of the lungs, known as "consumption," if the right kind of patient and the right kind of doctor do not co-operate at the right time in the right manner.

4. *Family history*.—Must be elicited with the object in mind of determining contact with

"open" cases, usually for long periods in the home. "Inherited tuberculosis" usually means childhood infection.

4-a. *"Predisposition"*.—Prolonged exposure with latency in an ungarded developmental period. "Run down," "caught it from a cold," the lighting up, at critical periods, of the latent infection, due to social exigencies.

5. *Personal history*.—Subjective symptoms are present before physical signs; better be over-zealous and scare many than over-timid and neglect one. Ponder well the suggestive loss of weight, the irritable pulse on exercise, tiredness, digestive disturbances, cough with streaked sputum, fever, pleurisy, dry or with effusion.

6. *Physical findings*.—Auscultation, the basis of the earliest signs; useless unless the entire chest is exposed. Judgment, after examination of apices alone, extremely dangerous. No opinion without full opportunity for complete analysis of findings.

6-a. *Most important aid*.—Variation in voice and breath-sounds; the use of cough followed by deep inspiration; the expiratory cough followed by deeper inspiration; the great aid in eliciting râles when few in number. "Râles produced by ordinary breathing" mean that the disease is no longer incipient.—Miller.

7. *Physical findings (continued)*.—Palpation,

*Read before the Minnesota State Medical Association, October 6 and 7, 1910. The paper was illustrated with lantern slides and was the basis for the discussion and demonstration of two cases.

percussion, and inspection, useful only in determining the extent of the disease, consolidation, cavity formation, etc.

7-a. Râles may be numerous in a well-arrested determined more by the patient's resistance, pulse, and temperature, ability to exercise without a re-action, etc., than by changes to be noted by physical signs.

7-a. Rales may be numerous in a well-arrested case and continue for years.

8. *Laboratory and immunity tests.*—Positive findings of tuberculous bacilli,—the best evidence we have in diagnosing pulmonary tuberculosis. Search should be made at any and all times where there are any suspicions.

8-a. *Negative findings.*—The least trustworthy evidence in establishing either the absence of pulmonary tuberculosis or determining its arrest. The number of bacilli is very little index to the extent, increase, or remission of the disease.

9. *Tuberculin.*—Should be the last resort instead of the first. Von Pirquet—very valuable in children. Calmette—no longer used. The injection of O. T. useless unless accompanied by localizing signs and symptoms. The more fully we exhaust known methods of observation and physical examination, the less often we need to resort to those tests.

10. Not more than 20 per cent of those who are actively tuberculous can, without financial assistance, arrest their own cases or protect their fellows from infection. It is the extremely exceptional home which can be made the proper habitation for the consumptive the first four to six months after he becomes aware of his affliction. We need, in Minnesota, institutional care for approximately 3,000 cases.

11. Do not shift your responsibility and exile your patient in a hostile community without observation, without friends, and usually without money. Remember that one county famed for its cures, in a famous state, spent \$30,000 burying people who went there for cure.

12. It is better to return the arrested case to the life he is familiar with than to make radical changes. A clerk will usually fail as a farmer, a railroad man as a truck-gardener. To remain cured the individual must become thoroughly and properly adapted to his own environment.

DISCUSSION

Dr. Walter J. Mareley (Walker): This is a mighty interesting subject, and Dr. Tuohy has given us an excellent demonstration. It seems to me there are one or two points to emphasize, of which the most import-

ant is the early diagnosis. I am glad Dr. Tuohy emphasized to such an extent the general symptoms which point toward tuberculosis. It requires an especially trained ear oftentimes to detect the very early chest-signs, and if our diagnosis is delayed until we can count the râles in the chest the case is no longer an early one; but we can study the symptoms and be guided by them to a great extent in making an early diagnosis. Another point is the after-care of the so-called "arrested" and "apparently cured" cases. I believe it is impossible to succeed sociologically in the tuberculosis movement if we insist on making a farmer out of a clerk, or send a school-teacher to become a raiser of flowers or a producer of chickens and eggs.

I find in my experience that a large percentage of cases that are "cured" return to their former occupations and remain well, but they do this by changing the conditions under which they work and live. A man works only part of the twenty-four hours, and although the occupation may not be carried on under the most favorable conditions, the play-time and the home-time are controlled by the patient and can be made right. Many patients make the mistake of thinking they are able to work because of their general appearance of good health, the result of months of outdoor rest-treatment. It is difficult for their friends to realize that this outward appearance of health is not always a true index of the real condition.

We have great difficulty in impressing upon patients and their friends the absolute necessity of the element of time in the treatment of tuberculosis.

Dr. Geo. D. Head (Minneapolis): This is probably one of the most timely subjects that have come before the Association. This whole matter hinges, so far as we medical men are concerned, upon the question of an early diagnosis. Now for about seventeen or eighteen years in dispensary, hospital, and private work I have been urging the use of tuberculin for the early detection of tuberculosis; and in my earlier experience it always seemed to me it was presumptive for me to keep harping upon the value of this test when older and more experienced men seemed to be satisfied with diagnosis made by physical signs. I feel now, after these eighteen years of experience, that I can stand upon my own ground, and that I have sufficient clinical experience to justify the statement I am going to make today. I doubt if a medical man in this room will deny but that every now and then, and sometimes very frequently, he sees a young man or a young woman, or a middle-aged man or a middle-aged woman, with cough or other suspicious symptoms, in whom, after examination, he can find no positive signs of pulmonary tuberculosis. The patient may have a slight temperature, and there may be a few transient râles in some localized area of the lung. He may examine the case again and again and apply all the knowledge which he has gained by study and experience, and still will be in doubt. The earlier the stage of the disease, the more often will this experience be repeated. The patient asks for a definite opinion. The physician hides behind a diagnosis of bronchitis, or throat irritation, or stomach cough, or asks for more time. No greater responsibility presents itself to the practitioner of medicine than this very question of the early diagnosis of pulmonary tuberculosis. It

outweighs in importance the diagnosis of appendicitis or any intra-abdominal lesion I know of. It is in the beginning of the infection that the patient wants your positive diagnosis, not after the lung-signs have become well marked and bacilli have appeared in the sputum. To diagnose pulmonary tuberculosis early, in many cases, by a study of symptoms and physical signs, is an impossibility. I am absolutely convinced of this point. If we want to make an early diagnosis we must have something more than these physical signs in the chest. They furnish us an insecure foundation upon which to rest an opinion. There are too many simulating conditions giving similar physical signs. The finding of tubercle bacilli in the sputum I consider a diagnostic aid too late to be of much help to the patient. It is a diagnosis made after softening and degenerative changes have taken place, and it is a late diagnosis from a pathological point of view. I doubt whether more than ten per cent of permanent recoveries occur after tubercle bacilli have been found in the sputum. We must discover and find a means which will determine tuberculosis prior to the finding of the bacilli in the sputum and prior to any extensive changes in the lungs. This we have in tuberculin. I have used it for diagnostic purposes now for fifteen years. I use the tuberculin made by the Bureau of Animal Industry at Washington. I prefer the subcutaneous test to either the von Pirquet, Moro, or Calmette.

Of one thing I am certain, namely, that the test does no harm, but only good, when properly given. I have seen a number of remarkable cures of pulmonary tuberculosis follow one injection of tuberculin for diagnostic purposes. I rely upon this test in all doubtful cases. I have given it in more than two hundred cases.

Dr. L. A. Nippert (Minneapolis): I wish to emphasize the point that Dr. Tuohy made in regard to the examination of the patient. The mistake is often made of trying to examine the patient with part of the clothes on. The only way to do is to strip the patient to the waist. The examination of the posterior part of the thorax should receive especial attention.

I would also emphasize the point, which is an important one, that auscultation done but once will not give a satisfactory result in making a diagnosis for the purpose of ascertaining beginning tuberculosis. If the patient shows râles over a limited area of the apex after several examinations he surely has tuberculosis.

I wish I could agree with Dr. Head as to the harmlessness of tuberculin. Such authorities as Sahli claim that every injection of tuberculin which causes a reaction does harm. You want to keep things quiet, you do not want to stir them up. If harmless what would be the use of going through a tedious physical

examination if by a simple injection of tuberculin you can find what you want at once?

As far as sending patients away is concerned, I think we have committed a great many crimes. Patients have been sent away when they have no money and no friends. As a result of such a course, as Dr. Tuohy remarked, \$30,000 were spent by one county for burying people who were sent away to a climate where the air is no better than it is in Minnesota.

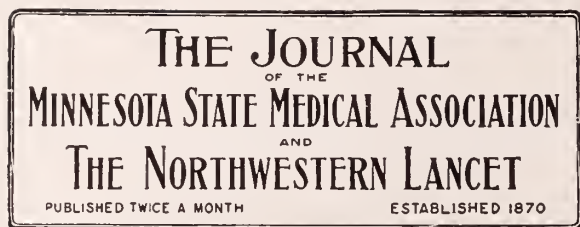
Dr. W. H. Aurand (Minneapolis): I would like to ask Dr. Tuohy a question or two. What are we going to do with the young tubercular cases, say a young unmarried man who has incipient tuberculosis? Shall we send him away or keep him here? Shall we make him stand the winter in this climate if he can make his living in a southern climate? Shall we advise that man to go away or advise him to stay here?

Dr. Tuohy (Essayist): Referring to Dr. Aurand's question, I can best answer by stating that no man who has any active symptoms of tuberculosis, no matter how incipient the lesion, is in any position to make his own living. By trying to do so he violates one of the first principles of cure, which is *rest*. This is realized more and more and is the chief reason why the average individual needs public aid in order to arrest the disease.

As to seeking some other climate to help him in his cure, this is a relic of exploded belief that has no place in our attitude toward tuberculosis today. This has long been largely a shifting of responsibility, and the results have been most disastrous. For the very few who have means there may be some excuse for it, but for the average individual it means ostracism and grief in a hostile and strange community; a waste of most valuable time without proper *supervision*. If the man is to be cured anywhere he can be cured here in our own state, and the rigor of our climate is a positive benefit if the proper accessories for treatment are provided.

Dr. Nippert and Dr. Head have both kindly emphasized the extreme value of early diagnosis. I have tried to show that the fundamental basis of early diagnosis is the proper knowledge of the art of auscultation. If you do not understand how to interpret the auscultatory signs you will not be able to make an early diagnosis.

In the use of tuberculin the greatest emphasis must be placed upon "localizing signs" or "an increase in existing signs" at the height of reaction. Here again is demanded a thorough knowledge and familiarity with signs to be elicited by proper auscultation. Properly given, tuberculin assists wonderfully in a few doubtful cases; in a great majority, enough evidence will be found to make its administration unnecessary.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

APRIL 1, 1911.

RETROGRESSIVE MEDICAL LEGISLATION

A printed circular addressed to the members of the Minnesota Legislature is being distributed at the capitol. We very much deplore that such utterly distorted views as to the effect upon medical sociology of the present upward trend of medical education should appear over the signature of one of the members of the State Medical Association, and yet more do we regret that in his mistaken zeal to correct imaginary wrongs, he has unwarrantably given the legislators to infer that in his diagnosis and treatment of them, he represents officially the Legislative Committee of that Association.

We refer to the communication in which Dr. Christian Johnson, of Willmar, takes it upon himself to attack both our State Board of Medical Examiners and our University Medical School, in support of a bill to do away with the requirement that future candidates for medical licensure shall have two years of pre-medical college work in addition to a four-year high-school course as a preliminary to a four-year course in an accredited medical college.

We give the circular in full:

TO THE MEMBERS OF THE MINNESOTA
LEGISLATURE

The following communication refers to "A Bill for an Act to Amend Section 2296, Chapter 35, Revised Laws of Minnesota for the Year 1905, as Amended by Chapter 474, General Laws 1909, Relating to the Ex-

amination and License of Physicians and Surgeons." It amends the present statute by inserting a clause defining what shall be the minimum preliminary education for medical students, to-wit: A full four years' State high-school course, including one year's course in chemistry, physics and biology.

Medical service is now-a-days a prime necessity to the family on the farm as well as in the towns and cities. In older times the mother on the farm managed to get along with the midwife and her herb tea, because she knew nothing better. Today the farmer's wife demands the physician at her confinements to give anesthetics and otherwise help her through the crisis of her life—and a broad humanity says she must have it. There are today in this state hundreds of deaths annually, and invalidism and suffering beyond computation owing solely to the scarcity of physicians in the rural districts of the State.

The scarcity of physicians in rural districts is mainly due to the policy of the State Board of Medical Examiners, which under the plea of higher educational standards—but in reality to give the medical college at the State University a monopoly—has raised its requirements so that we have a veritable medical monopoly in the State. It is to break this monopoly and give the people of the State in need of medical services a chance to get physicians from the outside that this amendment is urgently needed. Pass it without delay.

Don't listen for one moment to the monopolistic crowd which will, no doubt, come before the Legislature and claim that it is lowering the standards of education. It is not lowering the proper standard.

The standard here proposed and fixed so that a state medical examining board cannot monkey with it to suit the medical monopolists, is the standard of the State of New York. The educators of the State of New York have lately re-examined the whole question and fixed it at that—a full four years' High School course, including studies in Science, Biology, Chemistry and Physics, as required subjects, as preliminary education, and a full four years' course in medicine at a reputable medical college. This is, in fact, the standard of the world, and I challenge any one to deny this fact.

The New York Committee says: "To insist on a thorough four years' preliminary education and a thorough four years' medical education is, in our experience, thoroughly abreast of the present day demands, and when executed as rigorously as are these requirements in the State of New York, they have caused some criticism by their exaction, while in the future it may be possible to compel a five years' medical course, we see no immediate demand for it, and doubt its advisability."—Journal American Medical Ass'n., Vol. 48, page 1891 (June 1, 1907).

The medical monopolists will tell you that the profession of medicine is overcrowded today—yes, at the University campus and in the great cities, no doubt, but not in the country districts. Physicians in the country districts are making on an average of \$2,000 per annum, and the people are asking for more and are willing to pay for their services. And as the medical college at the State University seems not to want to educate men for general practice in the country, the public in general and the medical profession in the

country in particular, demand that you legislators pass this amendment to compel the State Board of Medical Examiners to let down the bars and give the State of Minnesota free trade in good doctors—for a young man who has completed the studies herein prescribed as the minimum is as good a doctor as study alone will make him.

Dr. W. T. Counselman [*sic*], professor of pathology at Harvard Medical School, says:

"As I have looked over the requirements for examination in certain of the States it has seemed to me that the element of protection has entered into demands of some of them. A definite curriculum of study is required by some and in certain instances the requirements directly conform to schemes of medical education in the State Universities. Certainly this serves an end, probably an important one, in bringing the entire scheme of legislative protection into disrepute, but this is not the end arrived at. After carefully weighing in my mind the advantages and disadvantages of State supervision and control of medical education, I think more is gained without it and that medicine had better be on a square free-trade basis."—*Journal of American Medical Association*, Vol. 53, page 516.

As Minnesota is one of the states that Dr. Counselman [*sic*] refers to where medical protection has run mad and produced a monopoly, we should have our law amended or abolished altogether.

Respectfully submitted.

CHRISTIAN JOHNSON, M. D.

Member of the Legislative Committee of the State Medical Society.

Willmar, March 20, 1911.

Had Dr. Johnson read the Educational Number of the *Journal of the American Medical Association* (Aug. 20, 1910), he never would have said, "This (a high-school course plus four years of medical-college training) is, in fact, the standard of the world, and I challenge anyone to deny this fact."

The fact is, the College of Medicine of the University of Minnesota is one of the small group of medical schools, including Harvard, Johns Hopkins, Cornell, Michigan, Pennsylvania, etc., that are trying to reach the high standards of Europe. For instance, Sweden, as Dr. Johnson must know, requires that after graduation from the gymnasium, whose course is more exacting than that of our high school, the student must take one year of natural science work in the college of philosophy, followed by seven years of medical study in order to obtain a license to practice; and the doctor's degree requires still more work and the passing of special examinations.

In drawing attention to the alleged scarcity of physicians in the rural districts of the State, Dr. Johnson has seen fit to attack the State

Board of Medical Examiners, accusing it of connivance with the State University in creating a monopoly. When he warns the legislators against "the monopolistic crowd which will no doubt come before the legislature and claim that it is lowering the standards of education," we are interested to know to whom he refers. We have always assumed that the State University, being the people's university, was our university and Dr. Johnson's university.

His quotations from the *Journal of the American Medical Association*, in one of which he cites Dr. W. T. Councilman, of the Harvard Medical School, would doubtless prove amusing to that *Journal* and to Dr. Councilman and his colleagues on the Council on Medical Education of the American Medical Association, should it by chance be brought to their attention. It must be remembered, however, that amusement may be too dearly purchased, and Minnesota will be placed in an unfortunate position if she gains a reputation for an iconoclastic present built upon a progressive past, which condition of affairs is brought about through the misguided activity of individuals who fail to familiarize themselves with actual conditions, and who confuse cause and effect.

Minnesota has already afforded some "amusement" in connection with this very matter, as can be seen in the Flexner report issued by the Carnegie Foundation for the Advancement of Teaching (Chap. 1, pp. 17 and 18). After giving statistics in relation to the overcrowded condition of the medical profession, Mr. Flexner says:

"The statistics just given have never been compiled or studied by the average medical educator. His stout asseveration that 'the country needs more doctors' is based on 'the letters on file in the dean's office,' or on some hazy notion respecting conditions in neighboring states. As to the begging letters: selecting a thinly settled region, I obtained from the dean of the medical department of the University of Minnesota a list of the localities whence requests for a physician have recently come. With few exceptions, they represent five states¹: fifty-nine towns in Minnesota want a doctor, but investigation shows that these fifty-nine towns have already one hundred and forty-nine doctors be-

1. The general distribution in these states shows that overproduction prevails in new states as in old ones: Minnesota 1 physician; 981 inhabitants; South Dakota 1:821; Iowa 1:605; North Dakota 1:971; Wisconsin 1:936.

tween them! forty-one places in North Dakota apply; they have already one hundred and twenty-one doctors. Twenty-one applications come from South Dakota, from towns having already forty-nine doctors; seven from Wisconsin, from places that had twenty-one physicians before their prayer for more was made; six from Iowa, from towns that had seventeen doctors at the time. It is clear that the files of the dean's will not invalidate the conclusion which a study of the figures suggests."

The apparent lack of physicians in a community is often found upon investigation to be due to a disgruntled druggist or one who has offices to rent, or to certain other conditions, rather than to the actual need of the community. Paper towns, too, are frequently desirous of supplying themselves with a complete equipment of tools, including a doctor.

The plea presented by the circular that the rural districts of Minnesota are suffering from a dearth of physicians on account of the high requirements for medical licensure, and Dr. Johnson's "demand that you legislators pass this amendment to compel the State Board of Medical Examiners to let down the bars," is not likely to find any endorsement, either by the profession or the public when all sides of the question are considered. We wonder how many of our readers know in their own localities of real openings for physicians, either well or ill-trained.

Our profession has obligated itself, from the earliest times, to pass on its knowledge to succeeding generations. This knowledge has grown so enormously with the advance in the chemical, physical, and biological sciences that modern medicine requires a correspondingly broad foundation. Because most of us have had to graft upon our clinical experience the advances in science as they appear, thus getting our cart before our horse, is all the more reason why we do not wish to set our successors the even greater handicap of less relative grasp of the science and culture of today than we had of that of yesterday.

In the next few busy weeks, during which over one thousand bills must be disposed of by the Legislature, we hope that no such retro-

gressive step may be taken as the lowering of the standards of medical practice or teaching in our State, which already has made such noteworthy progress. The only danger lies in the possible failure of our legislators to recognize the situation, or because they may take it for granted that the circular represents the sentiments of the medical profession.

The sponsor in the House for the bill advocated in the circular, is Dr. Diessner, of Waconia, who is the author of "A Bill for an Act to amend Section 1479 of the Revised Laws of Minnesota 1905, relating to the organization of the University of Minnesota and *creating a College or department of Homeopathic Medicine and Surgery.*" House File No. 315.

A WISE GOVERNOR AND AN UNWISE BILL

In our last issue we expressed our confidence that Governor John Burke, of North Dakota, would veto H. B. No. 436, and we are glad that he not only vetoed the bill, but that he made such an admirable statement of his reasons for doing so.

His letter, addressed to the Secretary of State, as the legislature had adjourned before the date of the veto, is a proper rebuke to every legislator, in every state, who votes for a bill with which he is not familiar or which, perhaps, he has not read. Such legislation is only too common in every State of the Union, but the day for such voting is rapidly passing away.

We take great pleasure in giving herewith Governor Burke's veto letter:

Bismarck, Mar. 16, 1911.

To the Honorable, the Secretary of State:

I file herewith House Bill No. 436, to license and regulate hospitals, sanitariums and other institutions and for the protection of patients therein, without my approval, for the following reasons:

Section 5 of this act provides that no major operation shall be performed on any patient in any licensed hospital except in an emergency until the attending physician or surgeon has filed with the superintendent of the hospital a statement giving the reasons and pathological conditions that render the operation necessary. This statement must also be approved and signed by an independent qualified physician not to be in any way a financial beneficiary from the operation. It will be noticed that this provision is confined to operations in hospitals only, and there is nothing to prevent any physician or surgeon from performing such operation in the patient's home or in any place, except a licensed hospital. It prevents such operations in the very place that is best equipped and especially provided with

2. Ten of the fifty-nine were without registered physicians; but of these ten, two are not to be found on the map, two more are not in the Postal Guide; of the other six, four are in easy reach of doctors; two, with a combined population of one hundred and fifty, are out of reach.

sanitary conditions for such operations, unless the conditions named are complied with; but leaves the door open for such operations elsewhere and without any conditions and regulations.

If this act became a law, surgeons who do not want to comply with the conditions or who could not comply with the conditions would simply perform their operations outside of licensed hospitals and instead of being a protection it would be a detriment to the patient in depriving him of the sanitary conditions and superior equipments of the hospital.

Again, since this bill reached this office, I have heard from nearly all the eminent physicians and surgeons of the state, men in whom I have confidence, and nearly all of them say that the conditions are practically impossible to comply with. I have talked also with members of the legislative assembly that passed the bill and am informed that the bill passed without any discussion and without its receiving any attention. The members that I have talked with have also said that if they had known of its provisions they would not have supported it. The bill was introduced by request towards the close of the session, and seems to have passed without any opposition or comment.

Relying upon the representations made by so many eminent and honorable physicians and surgeons of the state and believing that this measure would only tend to drive such operations out of the places especially equipped for such work and into places where the performance of such operations would be much more dangerous, I withhold my approval.

(Signed.) JOHN BURKE.
Governor.

CORRESPONDENCE

BROWSING AROUND THE VIENNA CLINIC

VIENNA, February 28, 1911.

TO THE EDITOR:

Today is a church holiday and much of the regular work at the University is suspended. Besides, it being the last day of the month, many of the clinical courses taken by the American physicians, have just ended for February, and the new period does not begin until tomorrow. So if one drops into the Club he will find it thronged with those interested in finding out what the prospects are for getting work the coming month. Some days before the end of the month notices are posted on the bulletin board to the effect that certain courses will be begun, stating whether they will be given in English or German, time of day, number of lessons, number of members allowed, cost, etc. Those wishing to join the section sign slips and await

the outcome. The work is so regulated that priority—length of time in Wien—establishes one's right to the offered opportunities. To illustrate, we will say that Dr. A. joined the Association September 15th, that Dr. B. joined October 10th, and that I came January 2d. A "course" with Christofaletti in gynecological diagnosis is posted to begin March 1st. I might be the first one to sign, and, however anxious I might be to get into the section, Drs. A. and B. having been here longer can, if they choose, "sign me off."

It will readily be understood how difficult it is for a new-comer to get into some of the more popular courses. Professor Kovacs, who began a course of twenty clinical lectures a week ago in internal medicine, was so sought after that not a man got into it who came to Vienna since last September. Some of these older and better-known teachers run what is called "book-courses." It seems that years ago, when Vienna was not the Mecca of medical learning that it has since become, and before the organization of the A. M. A. of Wien, physicians desiring instruction from Kovacs (medicine) or Tandler (anatomy) or Ghon (pathology) or Clairmont (surgery), and many others, signed a book kept in the possession of these various instructors, and sections were formed in the order of registration—hence book-courses. The system is now applied to all courses which come in a general way before the Association. The only way to circumvent it is to arrange personally and independently with the various teachers, and if they will consent to give a parallel course—which, by the way, is not easily effected—recent comers may get the work they seek a little earlier.

There are many rules and regulations which might be of interest to those contemplating a visit to Wien, but only the one governing courses is mentioned because it is a new ruling in the Association. It works quite a hardship in some instances, but is manifestly as fair for one as another.

Having nothing special on hand the latter part of the forenoon today I dropped into the Club-rooms. In looking over the records for the past year I find that twenty physicians from the State of Minnesota were here during that time studying medicine. There are eight here at the present time. About twenty-five new arrivals from various parts of America register monthly. The greater number remain only three or four months; a few stay a year or longer. The As-

sociation outgrew the headquarters they occupied in the Café Klinik, and late in the fall moved to commodious and convenient rooms over the Café Wien, diagonally across the street from the main entrance to the Allgemeines Krankenhaus, Alserstrasse 4. Here we have four large rooms, one of which is reserved for ladies. A clerk is employed who looks after the library, reading-room, collecting of dues, answering of questions, interpreting, etc. One coming to Vienna a stranger, if he can find his way to the Club, will be warmly welcomed, and made to feel at home at once. A friendly spirit prevails among the members and everybody seems glad and willing to help the new man get started.

Upon being informed this morning while at the Club that Professor Wertheim would operate at 11 o'clock I went in company with a physician from New Orleans and another from Denver to while away the time till dinner. Professor Wertheim is now at the head of what was formerly the von Rosthorn Frauen Klinik. For many years he was associated with Hofrat Prof. von Rosthorn before the latter's death, and succeeded him in the clinic. The Frauen Klinik is a part of the new Allgemeines Krankenhaus to be, and is built, it would seem, for all time to come. How much ground it occupies or how much money it cost, I am not prepared to say. Roughly estimated, I should say that it covers five acres and represents several millions of dollars. The Frauen Klinik is really two immense clinics, one under the supervision of Professor Schauta and the other under Professor Wertheim, and embraces the two subjects of obstetrics and gynecology. At another time I shall be pleased to go into a more detailed description of the two clinics, but for now I shall be content to speak more particularly of the operation as I saw it performed by Prof. Wertheim.

There are many operating-rooms in these new buildings, and one thing more than anything else that impressed me about its equipment is the lavishness with which the various rooms are supplied with modern plumbing. In the Kreisszimmer (labor-room) where as many as fourteen patients may be accommodated at one time, I counted six hot and cold water connections for washing and bathing purposes. But this is wandering.

The large operating-room is on the fourth floor and is fitted up according to modern ideas. Even here there are sinks for hand cleansing, though I saw no one use them. All preparations are

made in adjoining rooms—sterilization, hand-scrubbing, etc. Daylight is obtained from large north windows; no skylights, and no amphitheater. A space is chained off for spectators, as a gentle hint not to get too close to the operator.

The patient upon whom the operation was performed was a woman past middle life, afflicted with carcinoma of the cervix. The anesthetic generally employed in this clinic is the familiar A C E mixture, and it was cautiously given by an experienced anesthetist. Neither the operator nor any of his assistants wore gloves, or protected their faces and heads with masks or caps. The abdomen was thoroughly scrubbed with soap and water, but was not painted with tincture of iodine. The operation performed was the one known as Wertheim's radical operation for uterine cancer. The first assistant was Dr. Weibel, who has himself done the same operation hundreds of times, and is one of the most skillful, as well as dextrous, operators here. During the operation no one but the operator spoke, and he very little; not an instrument fell on the floor, which comment perhaps is uncalled for; no one lost his temper; there was no juggling of scissors and clamps, and no fumbling of sponges. A nurse looked after the instruments, sutures, and sponges, and like a flash she had the thing wanted the moment the operator wanted it. Such teamwork is beautiful to watch.

Inasmuch as I was unable from where I stood to see each step of the operation, it would be presumptuous for me to say it was in any way imperfect, but afterwards my attention was called to a few points by a London surgeon who stood very close to the table and who has performed the operation some seventy times, that Prof. Wertheim failed to clamp a plexus of veins near where the ureter enters the bladder before incising the tissues; and also that in closing the vaginal vault, he passed his sutures through and through instead of including only the submucous layer. To one not acquainted with every detail of the procedure, these little variations would pass unnoticed.

No animal tissue sutures are used in the Wertheim clinic. Silk is the only material employed, whether the sutures be buried or not.

I was much interested in noting the system observed in checking up the sponges after the operation. Metal racks with crossbars stand to one side of the room, having ten hooks on each bar, to which are hung the gathered pieces of gauze. A nurse picks them up as fast as they are dis-

carded by the operator and hangs them on the hooks. When ready to close the abdomen, Prof. Wertheim himself counted these as well as the clean ones lying unused on the instrument-table. After accounting for every sponge, the operation was completed by his assistants.

From the time the first incision was made to the closing of the abdominal walls, the hand of the clock went once and a half around. And speaking about clocks, every room of any size has at least one, and some have two; yet, there is no haste, no worry, no fretting, and every piece of work is undertaken and performed with such marked deliberation that one might sometime ask, "Why so many clocks?"

FREDERICK LEAVITT, M. D.

MISCELLANY

IN MEMORIAM

William Worrell Mayo was born May 31, 1819, near Manchester, England. He was a descendant of an old English family, who settled in the vicinity of Manchester in the year 1527, and many of whom have won marked distinction in the learned professions.

Dr. Mayo received his general education in Manchester, England, being a pupil and protege of the famous physicist, John Dalton, under whose direction he was trained as a physicist and chemist. In 1845 he came to the United States and practiced his profession as a chemist in New York City. He removed to Lafayette, Indiana, in 1847 and engaged in the study of medicine with the celebrated Dr. Eleazer Deming. After serving an apprenticeship with Dr. Deming for two years he went to St. Louis and completed his medical studies in the University of Missouri, acting as assistant to Professor John Hodges, graduating in 1854. After obtaining his medical degree he removed to Minnesota with his family, a wife and child, practicing medicine in St. Paul, later in Duluth, and finally locating in Le Sueur, Minnesota, where he resided at the outbreak of the Civil War.

In 1862 occurred the massacre of the whites at New Ulm by the Sioux Indians. Dr. Mayo was surgeon with the band of settlers who checked the advance of the Sioux. Shortly after this he was appointed Provost Surgeon for

Southern Minnesota in charge of the recruiting stations for the Civil War.

In the spring of 1863, he removed his residence to Rochester, Minnesota, where he continued to reside until his death on March 6, 1911.

In 1871 Dr. Mayo took a post-graduate course at the Bellevue Medical College, New York, receiving his addendum degree. He was always greatly interested in surgery and was one of the pioneers in abdominal surgery in America. He successfully performed his first laparotomy for ovarian tumor in 1871, and during the next thirteen years he made thirty-six similar operations. He was one of the first physicians in the West to adopt the aid of the microscope in medicine, and he became expert in its use.

Dr. Mayo was one of the founders of the Minnesota State Medical Society in 1868, and was its president in 1873. In 1882 he organized the Olmsted County Medical Society and was a member during the remainder of his life. He was a member of the American Medical Association for nearly fifty years. He made numerous contributions to medical literature on various medical and surgical topics.

Politically he was a staunch democrat. He served as mayor for the city of Rochester several terms, and was state senator for his district for two terms. Dr. Mayo was a life-long advocate of those political reforms which lead to equal opportunity for all men, and he lived long enough to see many of his ideals realized. He was most charitable to the poor, giving of both his time and money freely.

Dr. Mayo was not in active practice during the he greatly interested in his profession, and he made daily visits to St. Mary's Hospital which he was instrumental in founding in 1888. When he was 85 years of age he made a trip around the world alone, and when he was 88 years of age he spent several months in Japan and the Orient.

A BILL TO CREATE A STATE TUBERCULOSIS COMMISSION IN MINNESOTA

The present Tuberculosis Commission of the State Board of Health found itself more or less handicapped at the outset of its work; and this fact, as well as the great value of the work to be done, found so ready recognition in the present legislature, that the following bill, now before

both houses, will no doubt be passed with little or no opposition.

The bill as printed herewith contains two slight changes which will be asked for by the medical men who are working with the legislative committee of the two houses, and also an additional section providing for the acceptance of bequests. We print this section in italics.

A BILL

Be it enacted by the Legislature of the State of Minnesota:

SECTION 1. The Advisory Commission of the State Sanatorium for Consumptives shall hereafter be known as the State Tuberculosis Commission and shall consist of the five physicians now appointed and acting under and pursuant to Section 1927, R. L. of Minnesota, 1905, and who shall hold office for seven years from the time each was appointed and in addition thereto the Governor shall previous to the first Monday in July, 1911, appoint two citizens who are not practicing physicians and who have special knowledge of the administrative control of tuberculosis, one of whom shall be appointed for a term of one year and the other for two years, and thereafter each of their successors shall be appointed for a term of seven years; and previous to the first Monday in July of each year thereafter the Governor shall in like manner appoint a successor to the person on said Commission whose term of office expires July first following; but in all cases the Commission shall consist of five practicing physicians and two citizens who are not practicing physicians; and in addition to these seven members the executive officer of the State Board of Health and the president of the Minnesota Association for the Prevention and Relief of Tuberculosis shall be members ex-officio. No member shall receive any compensation for his services as such, but shall be allowed necessary expenses incurred in the performance of his duties payable by the state. One or more members of said Commission shall visit each district sanatorium at least once a year.

SEC. 2. The State Tuberculosis Commission shall establish and maintain in each district of the state corresponding to the congressional districts now existing one or more tuberculosis sanatoria for not less than thirty patients each, and the total amount expended for erection of buildings suitable for the care and treatment of tuberculosis and for the equipment and furnishing of said buildings ready for occupancy shall not exceed one thousand (1,000) dollars per bed, exclusive of the cost of site and of suitable water supply and proper disposal of sewage; it shall appoint in districts of the state corresponding to the congressional districts one or more district tuberculosis commissions, each of said district commissions to be made up of three members, one of whom shall be a practicing physician in good standing. Said members of each district commission shall be residents of the district and preference in appointment shall be given to persons who have had some experience in social or charitable work. Under the first appointment, one member shall be appointed for one year, and one for two years and one for three years from July first; and thereafter one member shall be appointed each year to serve for a period of three years

from July first. The members of said commissions shall ing or buildings for any sanatorium, and shall equip and furnish the same ready for occupancy; it shall have serve without compensation or financial benefit, but shall be entitled to reimbursement for all actual expenses in connection with their official duties. The State Tuberculosis Commission shall approve the site for any district sanatorium and shall determine in what county of the district any of the said sanatoria shall be located; in conjunction with the District Commission it shall approve the plans of construction of any district sanatorium building hereinafter provided for; it shall appoint such examining physicians as may seem to it advisable and the fee for each examination shall be \$3.00 payable by the state out of funds hereinafter provided for the maintenance of said sanatoria; it shall if necessary engage non-resident medical directors for any sanatorium; it shall establish rules regulating the admission and discharge of patients; it shall prescribe the medical and statistical records to be kept at the said sanatoria and shall approve the forms of such records; it shall have supervision control of the medical conduct of the institution, including the quantity and quality of food supplies, and shall make such regulations pertaining to said control as may to it seem advisable; it shall have the power to engage a paid agent who shall act as secretary and executive officer of the commission; it may grant financial aid to approved visiting nursing associations or to county boards paying for visiting nursing. At the expense of the state it may investigate conditions regarding tuberculosis in Minnesota and study the methods employed in the control of tuberculosis in other states.

SEC. 3. Each of said district tuberculosis commissions shall select the site for its district sanatorium; subject to the approval of the State Tuberculosis Commission it shall nominate and the State Board of Control shall appoint a competent superintendent who shall engage other necessary employees. The superintendent shall be secretary of the district commission. Subject to the supervising regulations of the State Tuberculosis Commission, it shall control the general conduct of the sanatorium and may establish and maintain tuberculosis dispensaries. Each District Commission shall visit the sanatorium of its district at least once every month. The members of said District Commission shall qualify by subscribing to and taking the usual oath of office, and shall hold office as indicated above or until their successors are appointed and approved and have qualified.

SEC. 4. The County Board of any county which has established a sanatorium under the provisions of Chapter 347, Laws of 1909, or entered into any contracts therefor or toward that end, is hereby authorized to sell and convey such entire property to the state, in fee simple, and the State Board of Control shall purchase the same at such price and upon such terms as may be mutually agreed upon, but not for any sum greater than has been expended or contracted therefor exclusive of maintenance cost, and when so acquired by the state it shall become a District Sanatorium as hereinafter provided for.

It shall be the duty of the State Board of Control to purchase necessary sites provided that such sites have been previously approved by the State Tuberculosis Commission, and in accordance with the plans and speci-

fications approved by the said Tuberculosis Commission and the District Commission shall construct the build-control of all financial affairs of the District Sanatoria herein provided for.

SEC. 5. The State Sanatorium now existing at Walker in this state under Section 1927, R. L. of Minnesota, 1905, shall be considered as one of the district sanatoria pursuant to the provisions of this Act, after August 1st, 1913.

SEC. 6. Any resident of this state who is afflicted with tuberculosis in any stage may apply for admission to any sanatorium in the district in which he is resident, and subject to the rules for admission established by the State Tuberculosis Commission shall be eligible for treatment in any sanatorium under the supervision of the State Tuberculosis Commission; or any licensed physician, visiting nurse, charity worker, humane officer, health officer, or any other person may apply on behalf of such individual. All applications shall be numbered and considered in the order of their receipt. The State Board of Control and the State Tuberculosis Commission shall fix the amount to be charged for care and treatment in any district sanatorium which the patient shall pay except as hereinafter provided. The District Tuberculosis Commission shall determine the legal residence of all cases admitted, and no person who is a legal resident of Minnesota shall be refused admission to any sanatorium of his district because he cannot pay the fixed charges for treatment. A patient who in the opinion of the District Tuberculosis Commission is found after admission to be unable to pay said charges, and who is without kindred legally liable therefor and able to pay shall be cared for notwithstanding and the county in which said patient has a residence shall pay the fixed charge for his care and treatment.

SEC. 7. It shall be the duty of the Auditor of the State of Minnesota to make a levy on all taxable property of the state, said levy for 1911 to be three-tenths (3-10) of one mill on the dollar of the total assessed valuation, and for each year thereafter two-tenths (2-10) of one mill on the dollar of the assessed valuation; and the amounts collected under said levy are hereby appropriated for the purposes set forth in this Act.

SEC. 8. All Acts inconsistent with the provisions of this Act are hereby repealed.

SEC. 9. This Act shall take effect and be in force from and after its passage.

A PROPOSED ADDITIONAL SECTION

The State Tuberculosis Commission or any district tuberculosis commission is empowered to accept as a trust any gift, donation or fund from any source whether subject to special provisions of the donors or not, and such gift, donation or fund shall be deposited in the treasury of the State of Minnesota and shall be disbursed by the State Board of Control upon the recommendation of the Commission accepting such gift, donation or fund.

NEWS ITEMS

Dr. J. T. Taylor, of Grand Forks, N. D., is traveling in Europe.

Dr. Ralph St. J. Perry has re-opened Fairview Hospital at Parker's Prairie.

Dr. Frederick H. Files, of Madison, S. D., died last month at the age of 48 years.

Fargo, N. D., has a new detention hospital, which is thoroughly modern in all respects.

Dr. Ralph H. Kinney, of Lake Benton, has sold his practice to Dr. Bursheim, and will locate in Iowa.

Improvements are under way on the hospital building at Walker, and the alterations will cost over \$4,000.

Dr. F. W. Briggs, of Crookston, will do post-graduate work in Chicago, and then locate at Hendrum.

The legislature of North Dakota, at its recent session, passed a resolution in favor of a National Health Bureau.

Dr. L. G. Hill, of Watertown, S. D., is doing post-graduate work in eye and ear work in the Eastern hospitals.

Dr. H. J. Shelver, of Audubon, N. D., has purchased the practice of Dr. Clay at Shakopee, Dr. Clay going to Winona.

Dr. C. L. Sherman, of Luverne, who has been at the point of death for several weeks, is reported as practically out of danger.

The new N. P. hospital for Montana and North Dakota will be located at Mandan, and work upon the buildings will soon be begun.

Through the efforts of Dr. George Kessel, Cresco, Iowa, a village of about 3,000 inhabitants, has a hospital that cost nearly \$50,000.

When the Syndicate Block was burned in Minneapolis last month about a dozen physicians lost their office effects and had to seek offices in other blocks.

The Northwestern Hospital of Moorhead has become very successful since its doors were opened to all physicians. Its rooms are now about full all the time.

Dr. H. M. Koller, who has been an interne at St. Mary's Hospital, Minneapolis, during the

past year, has become assistant to Dr. Horace S. Davis, of Duluth.

Dr. J. B. Trowbridge, of Hayward, Wis., died last month at the age of 60 years. Dr. Trowbridge has been a subscriber to THE JOURNAL-LANCET for over twenty years.

The plans for the new hospital to be built at Yankton, S. D., by the Benedictine Sisters, show a structure 220 feet long, with wings 80 feet long and all to be five stories high. The cost is estimated at \$250,000.

Dr. John P. Jones, after accepting a position on the staff of the More Hospital, at Eveleth, learned that the Government would not accept his resignation, and therefore he has resumed his work with the Government.

The people of Hutchinson are considering how that place can get a hospital, the need of which is greatly felt by the city and the surrounding country. The citizens are considering plans for raising the necessary money.

Dr. Horace A. Peabody, of Webster, S. D., died last month at the age of 60 years. Dr. Peabody had practiced in South Dakota nearly thirty years, and was formerly the chairman of the State Board of Health of South Dakota.

The Woman's Auxiliary of the Hennepin County Medical Society held its annual meeting last month. All officers were re-elected except the first vice president. The society will raise money to help tubercular patients at the Hopewell Hospital of Minneapolis.

Dr. Walter J. Marcle, who was for several years superintendent of the State Tuberculosis Sanatorium at Walker, and is now secretary of the State Tuberculosis Commission, has located in Minneapolis with offices at Reid Corner, Ninth Street and Nicollet Avenue. He will limit his practice to diseases of the chest.

Governor Burke of North Dakota vetoed H. B. No. 436 which passed the legislature in its closing hours with little or no discussion. This was the bill that required physicians operating in hospitals to file a diagnosis of the case before operating and to have such diagnosis confirmed by a disinterested physician or surgeon.

The legislature of Minnesota was not stampered by the bitter attack upon the State Board of Health made by Dr. W. T. Stone in a committee report which he wrote without a committee meeting and without investigation. The animus of the report showed upon its face, and the

House will seek evidence before acting. In short, it will make a scientific diagnosis before giving medicine.

Doctor: If you want practical post-graduate work Post-graduate Medical Dept., Tulane University of La. during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797,

PRACTICE FOR SALE

Practice in good South Dakota town, pays \$3,500 a year. Will sell practice and residence for \$3,000; one-fourth or one-third down. House has six rooms; is nearly new and modern; lot is best in town. Best of reasons for selling; opening a fine one! Address D. N., care of this office.

PRACTICE FOR SALE

A practice paying \$2,000 a year in a town of 900 in Southwestern Minnesota, is offered for sale cheap, and good man will do well from the start. Address K. B., care of this office.

PHYSICIAN WANTED

A regular practicing physician is wanted in a small North Dakota town; former doctor's practice amounted to \$2,000 a year; no other doctor in the place. One who can speak German is preferred. For further particulars address R. W. Weiss, Great Bend, N. D.

APPARATUS FOR SALE

One Bausch & Lomb microscope in case. Three objectives, including 1-12-inch oil-immersion, two eyepieces and glass jar cover. Good as new. One Allison table complete with stirrups, leg-holders, arm-holder, and leather cushion. As good as new. Highly polished oak. One Allison combination-cabinet, style 60D. Nearly new. Cost \$70.00. Highly polished quarter-sawn oak. An elegant cabinet for a physician. One Globe 5-bottle nebulizer with T pump and air-tank. One office-desk and chair. One good book-case. This entire outfit must be sold at once. \$175.00 takes it. Worth twice that much. This surely is a snap for some young physician just starting in practice. Address R. W., care of this office.

PRACTICE AND HOSPITAL FOR SALE

I will sell my practice, which pays from \$5,000 to \$10,000 a year, with a 14-room hospital for the price of the hospital, \$5,000. The location is in a South Dakota town mostly of German population. Will introduce successor, who must speak German. I am obliged to leave as I have accepted a public position in a large field. Address H. E., care of this office.

PRACTICE FOR SALE

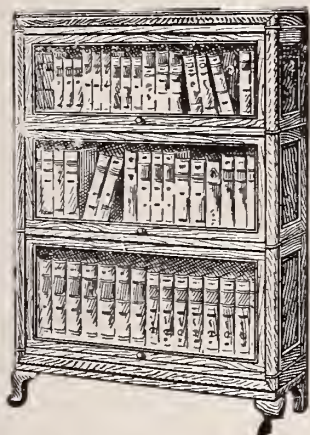
A \$3,000 unopposed medical practice with small drug-stock of about \$2,000. 10 miles to the nearest doctor or drug-store; population, Scandinavian. German, and Americans. Owing to illness I am obliged to quit practice. Address H. W., care of this office.

FOR SALE—STATIC ELECTRICAL MACHINE

A 24-plate, static electrical machine, with motor, rheostat, electrodes, and all appurtenances, with stand and platform in oak. A fine instrument in practically perfect condition. Cost, \$375. I will send it for \$100. Address H. S. M., care of this office.

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TEN YEARS Ago Sectional Bookcases were unknown. Today they are recognized as indispensable. Moreover, the somewhat crude original Sectional Bookcases have been improved upon in appearance to an extent which makes them today altogether artistic, convenient and appropriate as a piece of furniture in any room where it is appropriate to have books.

THE Sectional Bookcase illustrated is of exceptional merit from the standpoint of appearance, while retaining all the practical advantages of its less aristocratic brother.

YOU will notice that it unifies the Sections into apparently One Solid Case, doing away entirely with all metal bands, while retaining every desirable Sectional feature. In addition to the invisible locking device, it has interchangeable feet and perfect door mechanism.

WE can furnish this beautiful Case in either of three finishes, viz., golden oak, dull mahogany or early English; also in three different widths. It is of generous capacity and very reasonable in price: viz., for either golden oak or early English, \$22.50, or for genuine mahogany, \$27.50.

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PUBLISHER'S DEPARTMENT

THE LOS ANGELES MEETING OF THE A. M. A.

The physicians of the Northwest have before them one of the most delightful and profitable trips that can come into their lives, but much of the pleasure and the profit of the trip will be lost if arrangements are not made so that all who go can travel together. The route has been practically settled by the wise choice of the delegates from the East and from the States of Illinois and Iowa. It is over the Santa Fe line from Kansas City.

It is probable that most, if not all, of the Northwestern men will go to Kansas City over the Chicago Great Western line from Minneapolis and St. Paul and such other points on this line as they can best reach.

It is fortunate, in many ways, that these lines have been given the preference. The Great Western offers superb accommodations, it being, under its present management, one of the best-managed railroads in America. It will also route passengers by way of either Kansas City or Omaha, if any wish to go the latter way.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, APRIL 15, 1911

No. 8

BRAIN TUMORS*

BY HERBERT W. JONES, M. D.

MINNEAPOLIS

Under the term *brain tumor* we group all the various growths encroaching upon the space occupied by the brain. These may include tumors of the nerve tissue, of the meninges, the blood-vessels, the bone, and such extrinsic growths as the infectious granulomata and metastases from tumors elsewhere in the body. The reason for including all these growths is that their presence increases the intracranial pressure, which is the most important effect of growths inside the skull. It has been demonstrated that the brain itself is as incompressible as water, so that any increase of tissue inside the skull has the same effect as putting the head in a vise and slowly tightening the screws.

A large percentage of brain tumors occurs in middle life. In those which occur before the twentieth year, the two sexes seem to be about equally represented, but, after the twentieth year, the records of various observers tend to show that males are more frequently involved than females. As trauma is the only predisposing cause of brain tumors that we know of, the more frequent occurrence in males can probably be explained by their greater liability to trauma. Brain tumors occur much more frequently than is generally supposed. Bruns states that two per cent of all patients classified as neurological suffer from brain tumor. The records of insane-hospital autopsies show from one to two per cent of brain tumors. In Johns Hopkins Hospital the first five thousand surgical admissions showed six one-hundredths per cent of tumors, while the last three thousand showed 1.3 per cent, thus

showing a largely increased number found since special attention has been given them. There is no doubt but that the majority of brain tumors are unrecognized by the general practitioner. In one of our cases the patient had a distinct history of tumor extending over a period of twelve years. During this time he had been "cured" once by electricity, twice by the passage of urethral sounds, once by osteopathy, and once by magnetic healing.

I shall not go into the details of the pathology of brain tumor, but shall simply call your attention to the fact that, since the finer laboratory methods have been devised, the classification of tumors, from a pathological standpoint, has been greatly changed, and we now seem to be on a more rational plane. The tumors that formerly were classified as sarcoma, gliosarcoma, and cystosarcoma, have been shown by the neuroglia stain to be gliomata. As all nervous tissue is derived from the neural tube, these tumors are ectodermal in origin and therefore should not come under the classification of sarcoma, which is a tumor of mesenchymal tissue. However, as gliomata are so distinctive a type of tumor, they are not classified under the carcinomata, but are left in a class by themselves. The cells of gliomata represent all changes that may occur from embryonic neural-tube cells to the highly differentiated neuroglial, ependymal, or ganglionic cells. They are often infiltrating tumors without sharply defined margins. They may be cystic tumors with the glial substance entirely encapsulated in the cyst. They may be very vascular, and the first indication of a glioma may be a

*Inaugural Thesis, read before the Minnesota Academy of Medicine, February 1, 1911.

hemorrhage into the tumor, which gives all the clinical aspects of an apoplexy.

The next most frequent tumor of the brain is probably the endothelioma, and this takes its origin, as a rule, not from the endothelial lining of the blood-vessels, but from the endothelial layers of the meninges. The so-called acoustic tumor, which is being diagnosed with increasing frequency, is generally an endothelioma.

Sarcomata may occur in the brain, but are rare. They are either from the meninges, the connective tissue of the blood-vessels, or from the bone and diploe; or they are metastatic from sarcomata in other parts of the body.

Carcinomata are likewise infrequent, but may occur from the secreting cells of the choroid plexus or from the glandular cells of the pituitary body, or they are metastatic.

Cysts occur as simple serous cysts or as cysts from cerebral apoplexy, cysts connected with tumors, dermoid cysts, parasitic cysts, and gas cysts. There are a number of rare forms of tumor which occasionally occur, such as cholesteatomata, dermoid tumors, teratomata, lipomata, fibromata, neuromata, enchondromata, angiomas, and psammoma. Tuberculosis as represented by the conglomerate tubercle, syphilis with the formation of gummata, and actinomycosis are all represented in the brain tumors.

In the diagnosis of brain tumors we have two classes of symptoms, first, the general symptoms, and, secondly, the localizing or focal symptoms. The general symptoms are due to increased intracranial pressure. Among these, headache, vomiting, and choked disc are the important ones. The headache is due probably to the pressure upon the branches of the fifth nerve, which supply the dura. As far as we know, the substance of the brain itself is insensible, and the pain is felt only by the terminals of the peripheral sensory nerves. Headache may be very variable, sometimes occurring for but two or three hours out of twenty-four, and the rest of the time the patients are comparatively free from pain, experiencing only a slight or dull headache. As a good many patients are more or less demented by the existence of the tumor, they will not notice pain as readily as normal people, and will state that they are feeling fine, in the same manner that a case of general paresis will tell you that he is feeling fine. There are often exacerbations of the pain which come in paroxysms during the day. The headache during these exacerbations is atrocious, and one patient begged me

to kill him if I could not cure him. Vomiting may or may not be present and as a diagnostic symptom it is only corroborative. Choked disc is a definite, objective symptom of the greatest importance, but this, too, may be very variable in its occurrence. It may not appear until late, and the eyes must be carefully and repeatedly examined for its appearance and increase.

Two other general symptoms have been noted by Cushing: first, the venous stasis, which extends from inside of the skull to the veins of the eyelids; second, the interlacing and inversion of the color-fields, a symptom which has been regarded as peculiar to functional or hysterical states. In tumors below the tentorium, vertigo and dizziness generally occur. Among general symptoms which may occur, but upon which very little reliance can be placed in diagnosis, may be mentioned drowsiness, general convulsions, psychic disturbances, loss of weight, or increase of weight in pituitary tumors, disturbance of pulse-rate, respiration, body temperature, and a variable daily output of urine.

The focal manifestations of brain tumor may, or may not, be present. Much of the brain is still included in what we know as the silent areas. There has been a constant increase of known area and consequent decrease of the silent areas, but there is still left a large part of the brain in which a tumor can develop without giving us any localizing symptoms. Irritation of the brain, as manifested by general or Jacksonian convulsions and partial or total paralysis, are the localizing symptoms of the most importance. However, these, as well as psychic disturbances, sensory conditions, and blindness, must be interpreted with the utmost care, because a tumor in a silent, or relatively silent, area may cause enough general pressure to affect a nerve or area of the cortex at a distance from the tumor itself. This effect may be caused by direct pressure or by strangulation of the circulation and a consequent localized area of edema. I recently saw an autopsy on a case where the tumor had been localized in the cerebellopontine angle, because there was a paresis of the right sixth, seventh and eighth nerves. A suboccipital decompression was done, and death ensued a few hours later. The autopsy showed a large gelatinous mass of glioma in the left lateral ventricle, which had so pressed the brain down against the skull as to cause a paresis of these nerves on the opposite side. The suboccipital decompression released the support to the pons medulla, and the

pressure of the tumor above displaced them so that death rapidly ensued. This same effect has often been caused by a lumbar puncture in cases of brain tumor. The lumbar puncture releases the supporting column of fluid, and the pressure of the tumor herniates the medulla into the foramen magnum, and sudden death occurs. It is well known that paralysis of the sixth nerve, on account of its exposed position, may be caused by a tumor situated in almost any portion of the brain. Focal signs appearing late when only general symptoms have been present previously, are often false, and you will probably all remember cases in which operation showed no tumor where the symptoms indicated the lesion.

A comparatively recent reaction that has interested me, is the relation of the vestibular apparatus to the ocular movements. If we irritate the semicircular canals by turning the patient or irrigating the ear with hot or cold water or by the galvanic current, we get a nystagmus of the vestibular type, which has been worked out for the normal and abnormal states. The reaction is so simple that it should become more common in diagnosis of paralysis of the eighth nerve.

A large amount of information has been gathered, and is constantly being added to, by careful study of the symptoms and the degenerated tracts consequent upon brain affections, so that the mass of knowledge that we possess in regard to localizing symptoms is now great. As this fund of information increases, the interpretation of the findings demands a more and more comprehensive knowledge of the subject, in order that one may arrive at a correct decision.

The x-ray has helped us somewhat in the diagnosis of tumors which affect the skull, and I have seen plates which plainly indicated an enlargement of the sella turcica by a pituitary tumor. However, the x-ray is not a great help in the diagnosis of brain tumor.

Differential diagnosis.—Among the diseases which must be differentiated from brain tumor may be mentioned abscess, aneurisms, pseudo-brain tumors, hydrocephalus, serous meningitis, nephritis, and apoplexy. Multiple sclerosis, a disease which is rarely recognized in this country, but well understood in Europe, may present nearly all the symptoms of brain tumor. However, there is rarely choked disc, while optic atrophy is common. Among our cases I think the differentiation between brain tumor and vascular lesions inside the skull, general paralysis of

the insane, and the functional states, as represented by psychoneurosis, has been the most difficult. The early manifestations of parietic dementia are often due to localized edema in small areas of the cortex, which give rise to Jacksonian convulsions, periods of motor aphasia, and a general sense of demented well-being, which is very typical of brain tumor.

The Wasserman reaction will be of special benefit to us here, as well as in other syphilitic conditions of the brain, provided that that test is as reliable as it now appears. One of our cases diagnosed as brain tumor showed one of those peculiar brain degenerations in which the lymph-spaces seem to be clogged and the perivascular gray line is thickened and the pia-arachnoid edematous. As brain tumor and arteriosclerotic conditions are both more frequent in middle and later adult life, care must be taken not to confound the two. As almost all the victims of brain tumor sooner or later become neurasthenic and at times hysterical, it is not extraordinary that a great many tumors are superficially diagnosed as hysteria or neurasthenia. In fact, one of the classic symptoms of hysteria, that of inversion and interlacing of the color-fields, has been shown to be one of the most constant symptoms of brain tumor. One of our cases, that of a girl of eighteen, presented as typical a picture of hysteria as one would wish to see. The girl would go through a series of petulant, childish, hysterical fits, and in a few hours would be found peacefully sleeping with no sign of headache. However, careful examination revealed the presence of brain tumor. Attempted removal resulted in death from shock, and the autopsy showed a large growth occupying the whole frontal lobe of the right hemisphere.

The sensory phenomena of hysteria or neurasthenia are almost impossible to diagnose from those caused by intracranial growths unless some objective symptoms reveal the true nature of the disease. A good many patients are sent to us with a diagnosis of brain tumor who are suffering from migraine. It is comparatively easy to make this diagnosis, but the mistake seems to be a frequent one.

Treatment.—The questions to be asked in brain tumor are, first, is the tumor present? Second, if present, where is it located? Third, what is the nature of the tumor? Fourth, what is to be done?

It is needless to say that the early diagnosis is the best aid in the treatment. If the case can be

carefully watched and the symptoms observed by competent persons, we are not so often led astray by inferring too much from the history of the development of the case. The correct judgment is best made after a careful consideration of the development of symptoms and the order of their progression, but we are treading on dangerous ground when we carry our inferences too far.

The established treatment in a medical way of all brain conditions has been that of antiluetic medicine. Undoubtedly, this is the safest plan, but it should consist of a short vigorous course of mercury and iodides given in such a way that there is no question about getting the drugs into the system. The iodides may be carried to large doses. The length of time during which this treatment should be continued has been a matter of much debate, and no time limit will suit all cases. If the case presents only mild symptoms and there is no danger of blindness, the treatment may be continued for several months. If the symptoms are imperative, time should not be wasted on antiluetic treatment, because a gumma may totally destroy the sight before it can be stopped by medicines.

The Wasserman reaction will probably help us in deciding which cases should be treated and how long they should be treated. In our cases I have twice observed that men suffering from brain tumor would answer "yes" to the question as to whether they had had syphilis or not, while later developments would tend to prove that they did not appreciate what they were answering, although their mentality at the time seemed in fair condition. I remember one man who died of brain tumor after two weeks of antispecific medication. We now have a case under observation who was given a month's treatment with mercury and iodides last May and sent home as cured, only to have the symptoms return in July and steadily progress. It is well known that gliomata are often much improved for a time by potassium iodide, and this improvement may be very deceptive, but the symptoms of tumor soon reappear with increased violence.

The other medicinal treatment consists in general supportive medicines, as the nutrition of these people is often seriously affected and emaciation is rapid. Opiates should not be given or should be used with the greatest discretion. An instance of the most abject misery I have ever known was a man with brain tumor who had been taking morphine for about four years.

The morphine had dulled the pain, and the slow-growing tumor had eroded the bone into the sphenomaxillary fossa.

If these patients would die in a comparatively short time, probably the most satisfactory treatment would be sufficient doses of morphine to make their life bearable, but the morphine interferes with their general bodily functions and nutrition, and probably delays the time of death. Before the headaches are bad enough to require morphine they are best relieved by phenacetine or acetanilide combined with caffeine. The dose of these drugs may be large and will generally have to be given only once during an exacerbation, so that the amount in twenty-four hours is well within the safe limits.

In the surgical treatment of brain tumors we may endeavor either to remove the tumor or to so operate upon the skull as to palliate the symptoms. The radical removal of the tumor depends upon either the correct localization or the chance that it may appear in the field of operation, if palliative measures are instituted. The present practice of raising a large bone-flap gives a rather wide field for exploration; and a flap large enough to allow exploration of nearly the entire hemisphere may be raised. If the tumor is of an encapsulated nature, it can be rather easily shelled out. If it is an infiltrating tumor, its removal may be impossible. Unfortunately, a large percentage of tumors are irremovable, and the surgeon must rely upon palliative methods. These have been improved and the subtemporal and suboccipital decompression operations are now frequently done. It is easy to raise a large bone-flap from the side of the head, and, if the tumor be found irremovable and the pressure great, decompression may be accomplished by removal of the bone beneath the temporal muscle, leaving the muscle attached to the top of the bone-flap. The bone-flap readily unites to the rest of the skull, and this procedure gives one all the advantages of a large field for exploration and subsequent subtemporal decompression.

Much has been written in favor of and against palliative, or so-called decompression, operations. I recently heard a neurologist make the statement that he did not care to die more than once, and he should never allow a decompression operation to be performed on his head. In my experience the relatives often feel the same way, but the patient himself has always been very grateful for the relief afforded. Again, death does not

always come to these poor sufferers. The question then arises, shall we allow them to become blind from intracranial pressure and to suffer the torments of their atrocious headaches, or shall we try to relieve their misery? I have asked patients afterward if they suffered much from the operation. Their reply is nearly always that they did not, and they are very glad to be rid of the headaches. One patient made the remark that he did not mind the operation at all, but he would hate to have that nurse shave his scalp again.

The course of tumors is often much longer than we have been led to suppose. One of our patients was a case of slow-growing pituitary tumor, which had an unmistakable history of symptoms for a period of twelve years. Another tumor in the course of four years had performed nature's decompression, so-called autotrepation, into the sphenomaxillary fossa, and thereby relieved the intracranial pressure. The fact that a tubercle or a gumma may become quiescent, and that a glioma may become cystic or calcified and stop growing, makes it imperative that we should do what is necessary to give these people room enough inside their heads to take care of the temporary increase, so that, if a favorable metamorphosis should occur in the tumor, they will have full possession of their faculties for the rest of their lives. A decompression operation often makes possible the radical removal at a later time.

The suboccipital decompression operation is a serious procedure and should not be undertaken without fully considering the consequences of the large amount of operative work necessary, and of the dislocation of the vital centers that may occur.

The subtemporal decompression operation, however, is, in itself, a rather simple procedure. I have had patients who sat up and felt good enough to walk around the day after the operation; however, if there is great intracranial pressure, the sudden release of this pressure when the dura is opened is a great shock to the vital forces, probably caused by the displacement and edema of the brain. I have several times noted that the first operation, releasing the pressure, was followed by very severe symptoms, such as disturbance of consciousness, rapid, feeble pulse, and shallow respiration, lasting, at times, for two or three days. When, however, the second operation, exactly similar in character, was performed on the opposite side ten days later with no signs

of increased intracranial pressure, there was almost no shock.

Another thing which I think experience has taught me in the handling of these cases, is not to do too much operating after the dura is opened in cases of increased pressure. Repeated operations may be performed as often as every ten days with very little danger to the patient, but an endeavor to explore a brain under high pressure is nearly always fatal. Subtemporal decompression should not, as a rule, be done on both sides at the same time, and if the intracranial pressure is great, I think it is best to operate on the side opposite the tumor first, so as to have room to explore when near the tumor. One of my interesting cases was that of a woman with severe headaches, gradually increasing blindness, and a stupid, demented mental condition. Her husband finally consented to an operation, and, twenty-four hours before the time set, she went into coma, which was so deep that during the night her respirations were five per minute and the urine was loaded with sugar. She was put on the table in this comatose state, and a large flap was raised in the parietal region. A large cyst presented through the cortex, and was so large that we could not reach the bottom of it. It was swabbed out, the dura removed and sewed into a roll and fastened with one end in the cyst and the other out between the bone and the scalp. She awoke a little later than a person would normally do from ether anesthesia and went home well of her symptoms in twenty days, the sugar, blindness, and stupidity having disappeared. She has remained well ever since.

A quotation from Fraser runs as follows:

"For the future a great opportunity lies before the trained neurological surgeon in the way of scientific work. The best will be accomplished by the collaboration, not of the neurologist with the general surgeon acting as his carpenter, but by the neurologist with the neurological surgeon acting as his team-mate."

SUMMARY

1. The term *brain tumor* includes all growths that increase intracranial pressure.
2. Brain tumors are much more frequent than is generally realized.
3. Brain tumors are generally unrecognized by the medical profession.
4. The common form of brain tumor is the glioma, and not the sarcoma.
5. The localizing symptoms are often misleading.

6. The known areas of the brain are constantly increasing.

7. The medical treatment is unsatisfactory in all but luetic cases.

8. The surgical treatment, while still unsatisfactory, is the best we have to offer.

9. Most of the deaths from decompression operations are due to unwise prolongation of

THE PRACTICAL USE OF TUBERCULIN IN DIAGNOSIS*

By G. E. BROWN, M. D.

Interne Northern Pacific Hospital

BRAINERD, MINN.

In writing this paper, I have tried not to touch upon the theories regarding the action of tuberculin, nor to mention the various arguments that have been advanced against its use. These latter are, however, not very formidable at this time, since its use has become so general that the evil effects of the agent have been eliminated by a more thorough understanding of its nature, and its effects upon the diseased body.

It is a well-known fact that the diagnosis of incipient tuberculosis is an extremely difficult thing. The majority of cases are diagnosed by the finding of the bacilli in the sputum, and at this stage the disease is advanced, and the patient's chances of ultimate recovery are extremely remote. The great majority of cases of incipient tuberculosis do not present a characteristic disease-picture; and after careful examination and review of the history of the case, often the diagnosis is made with difficulty, if at all. It is in this class of cases that tuberculin has its greatest value, making an early diagnosis possible when taken with the evidence gained by other means. I have used only the skin, or cutaneous, and the subcutaneous tests, believing these to be the most practical and the most valuable of the tuberculin tests.

Cutaneous test.—This consists in the application of Koch's old tuberculin to the skin, and introducing it into the deeper layers by means of a scarifier. The reaction is inflammatory in nature and consists in the formation of a papule, varying from $\frac{1}{8}$ to $\frac{1}{2}$ inch in diameter, surrounded by a hyperemic area of varying size. The reaction is a specific one, as shown by sections of papules which present the characteristic pathologic picture of early tubercle, and is caused by the interaction of tuberculin, which is a toxin, and antibodies, which are formed in

the body by either the presence of, or previous existing, tubercular infection. The papule disappears in a few days, leaving no scar and having caused no harmful effects to the patient. A negative reaction shows neither distinct hyperemia nor papule. A very slight traumatic reaction may take place, however, as shown in the control.

Technic.—Any strength of old tuberculin may be used. Various workers on the subject advise a 10, 25 or 50 per cent solution. V. Pirquet, however, of late advises the use of the undiluted tuberculin. In a series of twenty cases, I used the four strengths, making four inoculations on each patient and one control, and in no case was there any doubt about the test, no matter what strength was used. There was a slight difference in degree of hyperemia and size of papule, however. The forearm is used as a site. Two drops are placed on the arm, about four or five inches apart, and the skin scarified lightly between drops for a control, and then scarified in the center of each drop. The scarification should not draw blood. The drops are allowed to dry, and no further care is necessary. The reaction appears in 24 to 48 hours, and should be observed at the end of each period. A delayed reaction may take place, appearing at the end of 72 hours or longer, which, however, has no significance. The degree of reaction varies greatly, though no clue is gained as to the nature or extent of the tubercular process by a difference in the intensity of the reaction, though it is noticed that in bone and glandular tuberculosis a very vivid reaction takes place. Often a colorless reaction takes place, and the papule cannot be observed in direct light. It can be easily felt, however. This is described by V. Pirquet as a cachectic reaction.

Cases.—I have tried the test on 106 individuals. Of this number 60 were clinically normals.

*Read before the Upper Mississippi Medical Society, Oct. 18, 1910.

17 of these were positive, and 43 negative; or, in other words, 28 per cent were positive, and 72 per cent negative. Of the positive cases further examination did not reveal active tuberculosis. Thirty-eight cases, of the 106, were regarded as suspicious. Twenty-one of these, or 55 per cent, were positive; 17, or 45 per cent, negative. Of this group, nine had pleurisy with effusion; seven of these were positive, two negative. Of the 21 positive cases only 15 would justify the reaction. Of the negative cases, further evidence at autopsy or at operation supported the negative results. Eight of the 106 cases in the series were clinically tubercular; 6 positive and 2 negative. The negative cases were tubercular meningitis and miliary tuberculosis.

Value of reaction.—The cutaneous reaction has a limited value in adults as seen from the cases quoted, though enough to warrant its use. A positive reaction merely shows the presence of a tubercular focus. As to whether an active lesion is present or not, no information is gained. It merely indicates tuberculosis in an anatomical sense. As to its specificity, there is no doubt. V. Pirquet, in a series of 1,600 cases, confirmed the test in 200 of these by subsequent post-mortem examination. As the reaction occurs in apparently normal subjects, this is made clear, considering the statistics of autopsy findings, regarding the frequency of tubercular lesions in adults. The figures vary regarding this, but Naegel's figures are astonishing, he having found 98 per cent of 500 unpicked cases at autopsy to show tuberculosis in macroscopic form.

The test has a high negative value. A negative test rules out tuberculosis, with a high degree of certainty. This is probably constant, if deductions are made for its failure in the very advanced forms of tuberculosis. The reason for its failure in the advanced forms is because the organism is overwhelmed by the severe toxemia that is present, and, consequently, further stimulation is impossible. The value of the positive reaction is much greater in children than in adults. In children below the age of four or five years, a positive reaction indicates, with a very high percentage, an active tubercular process, since healed lesions are very infrequent previous to this age. Its value in children decreases with increasing age. The cutaneous test is the ideal tuberculin diagnostic test for children.

Subcutaneous test.—This test consists in the

introduction of minute quantities of Koch's old tuberculin into the body. The reaction is specific, and various theories have been advanced to explain the test. Suffice it here to say, it is a reaction caused by the relation between the preparation of tubercle bacilli and the antibodies, which are present in the tubercular subject.

The reaction is general, local, and focal. The general reaction manifests itself by fever, general malaise, loss of appetite, headache, etc.; the local reaction, by tenderness and redness at the point of injection; the focal reaction, by increased activity at the diseased focus. If, for instance, in a case of pulmonary tuberculosis, the focal reaction may be manifested by increased râles over the infected area, increased expectoration, or, possibly, the finding of the tubercle bacilli where they could not be demonstrated previously. The focal reaction is quite constant and is valuable in localizing the tubercular process.

The general reaction is not specific and will be shown in any subject by the injection of large doses of proteid material. The specificity is manifested when the reaction appears, when minute quantities of tuberculin are injected, not sufficient in themselves to cause a reaction.

A reaction is considered positive when, in a subject with a previously normal temperature, a rise of one degree in temperature takes place, with a corresponding increase in pulse-rate, and the presence of local and focal symptoms. Reactions are designated slight, when the temperature is below 100.5 degrees, moderate up to 102 degrees, and severe when above this. The general symptoms are in relation to the temperature and the pulse rise. Some authors consider a rise in temperature and pulse to be diagnostic in itself, but the majority of workers believe the other manifestations to be necessary for a positive reaction. If, after a preliminary injection of a small initial dose, a slight rise of temperature takes place, and other symptoms are lacking, or slight, a second injection of the same amount should be given after the temperature is normal. It is best given the second day following, and if tuberculosis is present an accumulative reaction shows itself, which is very characteristic of tuberculosis. If any doubt still remains, again repeat the dose. A good rule to follow is, do not increase the dose unless there was no reaction with the previous injection. A typical reaction of moderate severity would present the following picture: at the end of eight

to twelve hours after the injection, the patient feels some tenderness at the point of injection, noticing it perhaps when stooping; a feeling of weakness and lassitude supervenes, and severe headache is present; generally the patient wishes to go to bed for a few hours. The temperature ranges from 100 to 102 degrees, and the pulse from 100 to 120. Careful stethoscopic examination might reveal increased râles, and alterations in breathing, in a pulmonary case. In the interpretation of the reaction, no one symptom decides a positive test. The diagnosis is made by the entire group of symptoms and signs. The recovery takes place in a few hours, and the patient feels absolutely no harmful effects.

The question arises, how large a final dose should be given when previous tests are negative, in order to rule out active tuberculosis? Koch sets the maximum dose at 10 mg., though other eminent workers on the subject declare a smaller dose of 5 or 6 mg. to be sufficient.

Probably, where no contra-indications are present, the larger dose should be used, as Bandler's cases show that of 500 sanitarium cases, clinically tubercular, 28.8 per cent reacted first to 10 mg. The contra-indications in using the larger dose would be in weak or convalescent patients.

At least three injections of increasing doses should be given to prove a test negative. A good rule to follow would be .5 mg., 1 mg., and 5 or 10 mg. Dr. Evans of Chicago recommends the use of one large initial dose, claiming a decided reaction takes place in tubercular subjects, therefore not requiring the longer observation necessary, when the successive smaller doses are used. He has used this method on hundreds of cases and has never observed any bad effects. Probably the smaller doses are the safer, however, and should be used, though in certain cases this method could be used where the necessary observations could not be obtained.

A severe reaction requires no treatment further than rest for a short time, and phenacetine and the ice-bag for the headache. The recovery is very prompt, and no harmful after-effects are noticed.

Indications.—The subcutaneous test is indicated in cases where, after a careful examination and a review of the history, the findings do not permit of a diagnosis. The skin test should be tried first. If no reaction occurs, no further test is necessary. If the skin reaction is positive, and no contra-indications are present, a

small dose of a .5 mg. of old tuberculin is given, and the general rules regarding its use, as previously mentioned, should be followed.

Contra-indications.—These are sharply defined in the use of the subcutaneous test. First, the patient's temperature should be normal for at least three days previous to injection; 2d, it should not be used in any advanced cases of tuberculosis, because of its failure to react, and, furthermore, its use would be superfluous; 3rd, in all cases with recent hemoptysis, severe heart and kidney diseases, and marked cachexia, its use is contra-indicated.

In cases of neurasthenia and hysteria, subjective symptoms and slight rises of temperature often take place from psychic causes, and though its use is not contra-indicated in these cases, great care should be exercised in placing the proper value on the symptoms. A preliminary injection of sterile water may be given in these cases, if considered necessary.

Technic.—Simple rules are outlined by the makers of the preparations, and very little skill is necessary in making the dilutions. These should be made in sterile normal salt solution or in ½% phenol solution, when it is desirable to keep it for a length of time. The dilutions should not be kept longer than a week.

A syringe, graduated to 1/10 cc., a small pipette, and a small glass graduate are all that are required for practical purposes. A bottle of sterile normal salt solution should be kept for making dilutions.

The injection should be made in the back at the angle of the scapula, alternating sides when repeating the test, and the temperature should be taken every fourth hour. The injection is best made late in the afternoon or early in the evening, and the temperature rise will appear the following forenoon, if the reaction is positive.

Cases.—I have tried the subcutaneous test on a series of 28 cases, to which the skin reaction had been previously applied. Nine of these were positive to both tests. Of the 9 positive cases, there was no doubt as to the positive diagnosis. The positive cases which were clinically or actively tubercular, reacted to smaller doses than the incipient cases. One of them was an apparently normal case, and reacted to 8 mg. Careful examination on several successive days showed persistent crackling râles in the right apex, with alterations in the breath-sounds, justifying the diagnosis of incipient tuberculosis.

The skin reaction was positive in 12 of the 18

negative subcutaneous tests, showing the tubercular process to be healed or latent. This series of cases is small, and no conclusions can be drawn from them other than that there are no contra-indications to its value. The records of various workers on this subject go to show that the reaction is of great value, if properly used and interpreted. Furthermore, the test is used by the best clinicians in the country.

Its use will not supplant the older methods, and it is not a short-cut in diagnosis. The test is only an aid, and to reach correct conclusions it should be used in conjunction with the older methods.

The reaction has no marked prognostic value. It has its greatest diagnostic value in a certain group of cases. I mean those where an absolute diagnosis cannot be made by the other available methods. These cases are the ones which, if diagnosed early, are probably curable; and if tuberculosis is ever to be eliminated tuberculin must be more generally understood and more widely used, both in diagnosis and treatment.

In conclusion, I wish to thank Dr. Courtney and Dr. Ide for the privilege of utilizing the cases, and Dr. Van de Erve, and other members of the staff for their assistance in preparing this paper.

TWO CASES OF CONSERVATIVE AMPUTATION*

By JOHN H. RISHMILLER, M. D.

Chief Surgeon of the Minneapolis, St. Paul & Sault Ste. Marie Railway

MINNEAPOLIS

One case is a conductor, where a railroad car-wheel had crushed over the upper part of both thighs, derailing the box-car, and where both

after fourteen months of attention. The entire skin on both thighs had been crushed loose from the muscles beneath. Both thighs had been considerably mangled, and there had occurred a great deal of sloughing of the muscles on the left. The left external hamstring had sloughed on account of another severe injury just above the knee, nevertheless, the left peroneal nerve had escaped practically uninjured, as there was no dropping of the foot. Injury to this nerve would naturally have been expected as long as the crush to the external hamstring muscle was so severe as to cause sloughing. The two skiagraphs show a supracondyloid fracture of the left femur. There had been a large wound, size $5\frac{1}{2}$ x 3 inches, over this fracture on the outside, exposing the bony fragments. Bony union had been obtained in seven and one-half weeks with no shortening, and with the three anatomical points in absolute alignment. The femoral or popliteal arteries and veins had, fortunately, not been injured.

Attention is called to the fact that very few cases of such a severe injury to the thighs are saved from gangrene and amputation, while a large proportion of crushes through the legs below the knees, even where the main trunk-arteries have been injured, are saved, mainly on account of the easier establishment of collateral circulation.

The other case is a brakeman, where a car-



Fig. 1. This skiagraph, taken anteroposteriorly, shows a supracondyloid fracture of the left femur, with displacement inward of the lower fragment and comminution of the lower end of the upper fragment. Note the dark outline of the patella over the external condyle.

extremities were saved and so serviceable a result obtained that the patient has resumed work

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

wheel had crushed over both legs above the ankle-joints, practically severing the left foot from the leg. The left extremity was amputated eight inches below the patella. The incision



Fig. 2. This skiagraph, taken laterally immediately after that shown in Fig. 1, and before reduction was accomplished, shows distinctly the necessity of taking x-ray pictures from different angles.

was made directly down to the osseous tissue; and the periosteum of the tibia, together with the

anterior skin flap, was elevated. As the anterior flap fell over the severed tibia, the periosteum served as a complete covering, and thus the subcutaneous tissues freely and painlessly move over the stump. On removing the tourniquet, which had been applied just above the right knee, the hyperemic blush running down the leg to the very tips of all the toes, was noticed, and from that it was concluded that the circulation had not been completely cut off. Special stress is laid on the hyperemia test of applying an elastic ligature for five minutes, in doubtful cases, on the upper limits of an injured extremity, where there is a question of "blocked" circulation. It is wise never to amputate in such cases until the circulation has been unquestionably and completely cut off, and gangrene is inevitable, as it is easy to amputate at any time. This case, while the crush had just escaped opening the ankle-joint, showed complete flexion and extension of the foot on the leg. The wounds in both cases had healed by first intention, and in order to save these severe crushing and mangling injuries of extremities one must be scrupulous in his surgical asepsis, as much so as in celiotomies.

A PLAN FOR THE ESTABLISHMENT OF LOCAL ROUTINE EPIDEMIOLOGIC WORK IN MINNESOTA

By H. W. HULL, M. D.

Director, Division of Epidemiology, Minnesota State Board of Health
MINNEAPOLIS

The fact that physicians in practice cannot be expected to bear the financial burden of the local routine epidemiological work that should be done in every case of communicable disease; that they have no authority, facilities, or time to do such work as it should and must be done to secure results; and the further fact that physicians in practice even *when acting as health officers* are most inadequately compensated at best, and, although they have the authority, are no better equipped in the other respects, lead to the inevitable conclusion that such work must be done by trained men, properly compensated, and having facilities and time for the purpose, as well as adequate authority. Hence, physicians not in practice should be appointed to do such work in the country districts. They should be subject to the approval of the State for appointment and to removal by the State on charges after hearing and investigation. Their duties, in chief part,

should be to visit each case of infectious disease as it develops, determine its source, take measures against further spread from the case itself, cut off further spread from the source found, and report all their findings and procedures promptly to the State Board of Health for comparison and correlation with other similar reports from other similar officers, physicians in practice, etc. Thus every case of infection in each locality would be promptly dealt with, adequately traced, the infection followed to its source, complete returns made, and proper data obtained for the co-ordination of the larger work of suppressing communicable diseases throughout the State. Such officers should supervise the enforcement of all the regulations of the Board, particularly those relating to the sale of milk, butter, etc., from infected farms, the prevention of secondary spread on the farms, measures to suppress fly-outbreaks, etc.

While such public health officers should possess many functions,—administrative, investigative, and remedial,—they should be particularly charged with local routine epidemiology,—the tracing of the source and routes of infection in every case of communicable disease within their jurisdiction, and with the investigations needed to determine and prevent the likelihood of spread from the cases found. While encouraging all needed local (emergency) measures, isolation, prevention of school attendance, etc., as called for by the regulations, their initial and most important function would be the tracing and discovery of infection, the notification of the findings to the local and State administrative bodies, to the schools, Sunday-schools, libraries, shops, factories, or other public utilities concerned, to the officers in the adjoining districts, or other districts involved, and to all agencies, such as district nurses, hospitals, etc., which may exist for or aid in the administrative control or the exercise of restrictive measures.

In brief, their chief function should be at the time and under present conditions epidemiologi-

cal, and therefore to familiarize themselves with the framework of the ramifications of the chains of infective discharges which propagate and keep alive communicable diseases in their districts; to find and act promptly on each focus which develops; and to unite and correlate all measures to prevent further development.

To keep them free for this work they should not be charged with the operation of any permanent agency for control of such diseases, as the operation of a laboratory, the care of a water- or sewage-purification plant, medical school-inspection (except as relates to the communicable diseases), district nursing, the care or management of hospitals, the collection of vital statistics (other than of the communicable diseases, etc.). Should it be found necessary to combine in one individual both epidemiological work and the direct charge of some one or more of these mechanisms he should be enabled, by explicit instructions and regulations, clearly to differentiate them, reporting to different authorities for each and maintaining co-operation rather than fusion between the different functions.

EVIL EFFECTS OF SMALL ADENOIDS

BY CHARLES F. COULTER, M. D.

WADENA, MINN.

For a long time adenoids have been known as a cause of various nasal troubles and reflex aural disturbances. But the determination of the presence of small adenoid growths and the interpretation of their significance have not been possible until recently, when Dr. Harold Hays devised his pharyngoscope. It is a comparatively easy matter to arrive at a diagnosis of adenoids where the mass is appreciable by palpation, but it will possibly be admitted that it is difficult to feel an adenoid which, when not inflamed, is only as large as a small hazel-nut. To give an opinion on the presence or absence of such adenoids is simply to court disaster. With the instrument of Dr. Hays a detailed study of the post-nasal space can be made with practically unfailing regularity in all patients. There need be no doubt of the relation of the adenoids to the opening of the Eustachian tubes or to Rosenmüller's fossæ. The whole territory can be seen and mentally mapped for future instrumentation. With the aid of the pharyngoscope we are beginning to appreciate

the influence of small adenoid growths in the epipharynx in the causation of the catarrhs of the nose and middle ear.

In this connection we must remember the great swelling of lymphoid or adenoid tissue when any acute infection occurs, as when the host catches cold or is under any depressing influence. Palpable adenoids, at such times, completely fill the posterior choanæ, while adenoids which when quiescent were only as large as a small hazel-nut, assume a volume sufficient to fill the vault of the pharynx down as far as the opening of the Eustachian tubes. Anyone desiring an idea of the capacity of an adenoid for swelling or the inhibition of fluid can get it by leaving a removed adenoid exposed to the air for twelve hours and viewing the remains.

Now, these small masses of adenoid tissue are commonly found in patients from 20 to 35 years of age, and may be the remains of larger amounts in youth. From their structure they are an easy prey to every passing infection, and from their

location they are under the influence of the varying temperature of the inspired air. They are practically always covered with a thick viscid mucus, which is irritant to, and drains down upon, the mucous membrane of the mouth of the Eustachian tubes, the pharynx, and nose.

These patients have commonly been treated for catarrh for years, with varying degrees of success, depending upon the recession of the inflammation in the adenoid. They are hawkers and spitters vainly trying to get the epipharynx clear. They are vicious nose-blowers for the same reason. Their ears are usually affected with catarrh of the adhesive type. This is caused, not only by the overstretching of the membrana tympani from bad nose-blowing habits, but also from the location of the inner extremity of the Eustachian tubes, for it is known that the inner extremity of the Eustachian tubes is in the territory of the lateral extension of the adenoidal ring of His, and that in the anterior wall of its mouth is a mass of lymph-glands. These glands being interconnected with the adenoid above, respond to every infection of their fellow by swelling which results in a productive inflammation. It will readily be seen that sooner or later the mouth of the Eustachian tube is bound by adhesions, its lining outward-sweeping cilia cannot perform the mucus-cleaning function, and the middle ear begins to suffer from the evils of lack of ventilation. This ultimately results in retraction of the membrana, producing deafness. Many of the patients have had turbinotomies done, sinuses explored, etc., but few have had the privacy of their pharyngeal vaults invaded. Some have the characteristic odor of ozena with small crusts distributed about the nasal interior. All have a wholesome respect for catarrh, and a correspondingly depressed idea of treatment and of doctors in general.

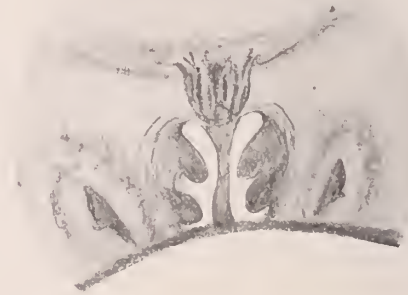
I will report the following case:

Miss B. L., Norwegian, age 21; comes with a

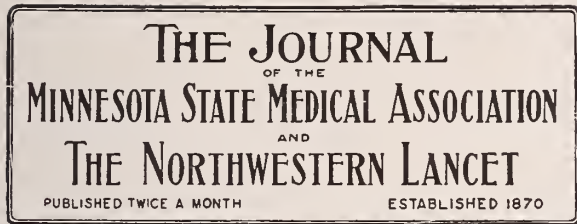
history of catarrh for years; bad breath; pain in the right ear when blowing the nose, which she performs in a repose-destroying manner; constant sore throat; fears for the condition of her lungs.

Family history, negative.

Examination: Nasal mucous membrane congested and covered with small crusts; inferior turbinates, intumescent; middle turbinates, half removed; the remaining half of middle turbinates contracted and covered with small crusts; right ear affected with otitis catarrhalis chronica; left ear, normal; kidneys, heart, and lungs, normal; hemoglobin, 75 per cent (Tallquist scale); pillars of pharynx and posterior pharyngeal wall injected and covered with thick secretion; tonsils small and sclerotic; breath odorous. On examining with the pharyngoscope I found a small adenoid just above the septum thickly covered with mucus, as shown in the accompanying drawing.



The adenoid was removed with a bent forceps without an anesthetic. Within two weeks the crusts disappeared from the nasal interior, and the mucous membrane recovered its normal color. Her hawking and spitting and violent nose-blowing were relieved at once. The subjective noises have left her, but some retraction of the right membrana remains.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

APRIL 15, 1911

HYPODERMIC MEDICATION

The variety of drugs that may be used hypodermically has greatly increased within the past few years. In some of the large cities on the Continent and in some of the cities of this country, the physician orders his hypodermic medication through the medium of his prescriptions, and the pharmacist prepares a sterile solution in small glass hypules. In this way solutions of various alkaloids may be administered in definite doses. The administration of iron, or of iron, arsenic, and strychnine, by the hypodermic method, is a common one, and the rapid and satisfactory results obtained in simple anemia or chlorosis by this method have been demonstrated in many instances.

It takes no longer to combine and prepare the mixtures in hypules than it does to make the same combinations in pills or capsules. The local druggists have not adopted this method yet, but in the larger pharmacies it will soon be a feature. When iron is used alone or in combination one is more certain of results than when the same drugs are administered by the alimentary canal.

Dr. August Seibert, in an article in the Medical Record for March 11th, advocates the use of salicylates in acute rheumatic infections of joints, heart, pericardium, pleura, and the central nervous system (chorea).

The patients are given a preliminary injection of a sterilized cocaine solution ($\frac{1}{8}$ gr. in 30

drops), and then a hypodermic of 10 c.c. of a twenty per cent sterilized solution of fresh sodium salicylate to 100 pounds of body-weight is given. In severe cases the dose may be increased to 15 c.c. These doses may be repeated every twelve hours.

In chronic cases Seibert gives 10 c.c. to 100 pounds of body-weight of the following oily solution every twenty-four hours: salicylic acid, 10 grammes; sesame oil, 80 grammes; pure alcohol, 5 grammes; gum camphor, 5 grammes. This mixture must be sterilized before the alcohol is added, but must not be exposed to the air, as the alcohol will evaporate and the salicylic acid crystals will precipitate. This solution acts better than the watery solution, as it is less quickly absorbed and less quickly eliminated by the kidneys.

The camphor is added in heart cases particularly. A spot outside the median line of the thigh is usually selected and disinfected by a few drops of tincture of iodine. The cocaine solution is followed in fifteen minutes by the oily solution, which is introduced under the skin, otherwise it may cause sloughing.

The one caution in all hypodermic medication is thorough sterilization. Unless this is observed the injection causes discomfort in various ways.

HOSPITAL BEQUESTS

The moneyed people of the West are still far behind Eastern philanthropists in the erection and maintenance of hospitals or other institutions for the care of the sick. Minnesota is beginning to wake up to the fact that but few hospitals have received financial aid while large sums are needed. The cities in which moderate-sized hospitals are located can record only one large sum for hospital construction, namely, the Elliot Memorial Hospital on the University Campus. About \$120,000 was realized for this teaching hospital. Even after the Elliot estate had presented this sum to the State of Minnesota, it was with difficulty and only after much argument that the legislature accepted the gift and consented to add \$40,000 for the completion of the Elliot Hospital building. When the question of maintenance and equipment came up for consideration there was a good deal of misunderstanding as to the advisability of the plan, but finally the sums, reduced in amount, were granted. If any other estate or if any wealthy individual desired to add to the hospital system the

same opposition of the legislature would probably be encountered.

The educational feature of all hospital benefits will have to be persistently urged. The usual legislative body cannot see how a State hospital on the University grounds can benefit anyone but the inhabitants of the city in which the hospital is located. It has been shown by the records that 59 counties have already contributed patients to the institution, which is sufficient argument for its enlargement and continuance.

It is not a pertinent question to point to the contribution of patients from Hennepin and Ramsey counties other than to explain that these counties contribute enough money by taxation to warrant their title to the larger number of beds. The legislators who use this as an argument fail to see that the counties in which they reside have the same rights and privileges to all hospital benefits.

In the large cities, Minneapolis and St. Paul, there are many so-called private hospitals built and maintained by private funds collected from many sources, and to some of these hospitals the people over the State have contributed various sums. In every hospital are found beds for charity cases, and each hospital does its proportionate share of charity work. It is not often that county lines are drawn, even in private hospitals. The principal reason for this is, that patients drift into the cities from country districts and establish a temporary residence in the city, and thus take advantage of dispensary and hospital offerings. It is therefore impossible to determine the actual residence of many dispensary and hospital patients.

Whatever argument is advanced the fact remains that the sick poor must be cared for, and the Elliot Hospital is intended to cover a neglected field. Particular advantages are found here that will be better appreciated after a year or two. When the people and their representatives understand the situation there will be an influx of patients that will overcrowd the present quarters and the State or private individuals will be called upon to make provision for them.

In the East it is no uncommon thing for people of wealth to give from \$10,000 to \$1,000,000, or even larger sums, for hospitals. The medical journals frequently record these gifts without comment. It is to be expected that philanthropists will be more and more interested in hospitals and the good they do.

The Elliot Hospital will have to be advertised

in some way, and if each patient who receives treatment therein will inform his representative there will be less hesitancy in appropriating money for a State institution.

EXTERMINATING THE WHITE PLAGUE

There are two indispensable forces in the fight now waged with great energy against tuberculosis, a wholly preventable disease. These forces are medical men and newspapers. The former alone can furnish the weapons and plan the battle; the latter alone can enlist the public in the fight, and it is a tremendous one, the biggest perhaps the world ever undertook.

We have before noted in these columns the splendid co-operation given the medical profession by the city and country papers of the Northwest, and we shall be glad to reproduce, from time to time, some of the editorials from these sources which can be helpful to the profession in this warfare. We give herewith such an editorial from a recent issue of the *Pioneer Press*, one of the cleanest and ablest newspapers in America:

Senator Sundberg proposes to give to the State health officials the data and authority needed to work effectively toward the control of tuberculosis. He has introduced a bill to require physicians to report all cases of tuberculosis, thus making it possible for those who are waging the war against the white plague to know just where there is danger. The bill also confers on health officials the power to report to county boards persons who are afflicted with tuberculosis and are considered to be a menace to their families and others. If the reports prove to be true the patient may be sent to a sanatorium and kept there at county expense.

The bill further provides that no school-teacher having pulmonary tuberculosis shall teach unless she has a certificate from a reputable physician stating that there is no danger of communicating the disease. The same sort of certificates will be required from school-children from homes in which there are consumptives.

The purpose of the author of the bill is to place in the hands of those making the fight against tuberculosis the weapons needed to insure victory. The proposed regulations seem, for the most part, reasonable and desirable.

It is essential, if an intelligent effort is to be made toward blotting out tuberculosis, that all the facts regarding the existence of tuberculosis should be known. It is not enough to wage general warfare. There must be action in each specific case. There is no reason to expect that the enforcement of a law such as proposed would be a hardship to tuberculosis victims. They and their friends may not take kindly to it, but they should recognize that concealing the facts or attempting to ignore danger does not help them and may do irreparable injury to others.

THE SPECTATOR

Half-past eleven o'clock, one hot summer morning when corn leaves curled up in wilted rolls under the sun's fierce rays, and heat-waves made the landscape dance and quiver, a buggy came jogging along the public road down into our valley. Being a top-buggy we could guess that it was either the preacher's or the doctor's rig, for no other settler in those days aspired to so dignified a vehicle. It was not the doctor's, for it showed no urgent haste. It was the preacher's, and this for sure when the horse turned in at the end of our lane—preacher's horses had been known to balk when not allowed to enter this lane. As soon as this buggy drove into the lane, mother sent us on the run to the barn for eggs; salt pork was not then thought meat for the clerical palate.

It proved to be the preacher and his maiden sister, a good lady with a bad case of the nerves. She greeted mother with warmth and unction. The doctor, she said, had prescribed absolute rest for her, and she knew of no place on earth where such sweet and perfect rest could be found as at Sister Blank's, Sister Blank being mother.

Now, be it known that this was harvest time on an extensive farm with its wide weed areas and its far-flung rail fences; its cows in breechy herds and hogs in devouring legions; nine children, one-half of them in the infant class; two hired men as table-boarders, and no hired girl. Mother was a saint. She was likewise game. Her smile of welcome did not fade a shade. She led the weak sister to the parlor bedroom, then hied herself to fire up the kitchen stove in the hot kitchen-shed. She piled the long extension-table with wholesome food and saw it disappear like soft snow before a chinook wind, the nervous sister doing her full share with the field-hands. Then went she systematically and energetically to work clearing away the wreckage while the visiting sister laid her down for her prescribed and much-needed siesta. This was before the days of professional rest-cures in our commonwealth.

Absolute rest is a much-to-be-desired state of blessedness. Every mortal needs a little of it every little while. This is why the Lord made mankind to sleep. Many a mortal thinks it would be the best possible state of existence in the future life. But absolute rest in unbroken

chunks on this earth is rarely to be found, outside sanitariums, for the party of the first part without some party of the second part paying for it in terms of absolute exhaustion. I am not sure that even the hospital and rest-cure sanitarium are not furnishing rest for the inmates at the expense of unrested ones outside. We were born into this world in team, in harness, and in the furrow. Those of the team who fall down must not only be hauled by their team-mates, but their load also must be distributed among the pulling ones. "We are members one of another," says an old writer, who further observes that we cannot lag, kick, or even die in harness (or words to that effect) without taking our fellows into account. The man who lies down in this world is pretty sure to lie on some other fellow.

I have been in summer camp with a party seeking rest. I have yet to see the summer camp where the rest is dished up in even spoonfuls all around. There is the girl who is left to wash the dishes, and the boy who is left to clean the fish. The boats on the lake and the hammocks under the trees also have their camp population. From time immemorial the classes have swung in the hammock, and the masses have carried the lemonade to them. Service has never been a badge of superiority except among the friends of a certain Great Physician, who taught a new code of ethics about nineteen hundred years ago.

I remember with an unfond remembrance a certain gifted lady who, like the nervous sister, sometimes recuperated at our rural rest-cure. She was of the upper stratum, some distance lifted above the plane of pots and pans. She saved herself for platform work, keeping her body, with religious care and systematic exercise, strong and wholesome for her high calling. She often chided mother for not doing likewise, going out, for example, after breakfast, standing against a porch post and inhaling deeply one hundred times, swinging the arms above the head and flexing the knees and elbows. She also thought that every right-minded woman should air her bedclothes on the clothesline every day and walk in the grove in the cool of the evening. But I noticed that she was willing that mother should air all the bedclothes, brew the tea, and make the toast, and wash, dust, and sweep up the disorder in her royal wake. She was a power in public speech. I have known her to get the Chautauqua salute in an enthusiastic summer assembly. Both women have long

since gone to heaven—at least I know that mother went. I am glad I am not the dispenser of justice to any mortal. I do not know anything about how much one must work or how much one may shirk that the one may have an abundant entrance into the Kingdom of Heaven and the other squeeze in through a rift in the gate. But this I know: Of the Great Physician, when dying, it was said by his assassins: "He saved others, Himself he could not save." So was it with mother. She died helping save others. So it is still in this world. Whole-hearted service calls for the whole strength, the whole life; but the reward is also boundless.

MISCELLANY

FINANCIAL LOSSES IN MINNESOTA DUE TO COMMUNICABLE DISEASES

Dr. H. W. Hill, Epidemiologist of the State Board of Health, has written the following letter to the Board in order to give its members, as well as the entire State, definite information on the subject of the financial loss caused by the existence of communicable diseases, a loss that is rightly put over against the expense of preventing, in whole or in part, such diseases and consequent waste. Dr. Hill says, under date of March 7th:

Gentlemen:—

At the last Executive Committee meeting some badinage was exchanged concerning my estimates of the losses due to communicable diseases in this State. I did not take this seriously at the time, but it appears that some false impressions were in fact conveyed, which it is the intention of this letter to set right.

Based on Irving Fisher's figures, Mr. Blakey made the losses from *all* communicable diseases in this State \$40,000,000. My own estimate for the *seven* communicable diseases in "The Quantitative Dimensions of the Communicable Disease Problem in Minnesota" (University Alumni Weekly, March 6, 1911), was \$15,000,000. The difference is accounted for partly because I considered *seven* diseases only, instead of *all*, partly in a more modest estimate of losses per case. I stated that my figures were extremely conservative.

On my figures, typhoid fever, constituting about one-fourth to one-fifth of the total of these seven diseases, would account for from one-fourth to one-fifth of the loss of \$15,000,000, or roughly about \$3,000,000 to \$4,000,000. Direct *water-borne* typhoid fever, constituting, as I believe, about one-third of the total typhoid of this state, would therefore involve an annual loss of about \$1,000,000 to \$1,500,000. This \$4,000,000 may be arrived at also thus, a loss per case, exclusive of deaths, of \$150.00, which is surely very conservative

for 10,000 bed-cases is \$1,500,000, and 400 deaths at \$5,000, is \$2,000,000, a total of \$3,500,000. Water-borne typhoid (one-third of this) would then represent a loss of about \$1,000,000 to \$1,200,000. These estimates are of course approximations, but are somewhat near the truth.

My statements at the hearing on the Water Supply Commission bill were to the effect that the problem of communicable diseases *as a whole* involved losses to the state of \$40,000,000 annually, or the interest on \$500,000,000 annually (at 8 per cent). Typhoid fever I quoted as constituting about 10 per cent of the *total* communicable diseases, or about \$4,000,000 annually, while the loss from water-borne typhoid constituted about one-third of the total, and hence one-third of \$4,000,000. The water-borne typhoid loss annually is equivalent then to the loss of 4 per cent interest on \$33,000,000 annually.

Dr. Bracken quoted water-borne typhoid as constituting 8 per cent of some total, which is true. It is about 8 per cent of the total of the *seven communicable diseases* considered in the Alumni article, or 8 per cent of \$15,000,000; i. e., about \$1,250,000.

Hence it will be seen that all the figures are fairly consistent. I hope that my disinclination to refigure them in my head at the Executive Committee meeting will not be interpreted as showing any lack of confidence in them on my part, or a tendency to regard them as of no real significance.

A curiously significant fact, to which no attention has yet been called, so far as I am aware, and serving to put the matter more vividly than any other that I know of is this: The annual loss from typhoid fever alone in this State would, if saved, pay the total annual incomes of all the physicians and surgeons in the State, i. e., 2,000 physicians at an average (A. M. A.) of \$2,000 per year.

Hence the loss through *all* communicable diseases would pay the *total medical, surgical, nursing, and pharmaceutical* bills of the entire State for *all* diseases and probably support the medical college as well!

(Signed):

F. W. HILL,

Director, Division of Epidemiology.

BOOK NOTICES

BISMUTH PASTE IN CHRONIC SUPPURATIONS: Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M. D., St. Louis. C. V. Mosby Company, 1910.

This is a well collected and orderly arrangement of the knowledge, to date, regarding Beck's Bismuth Paste. In the hands of very many clinicians this mixture has been a new and valuable adjunct in the diagnosis and treatment of chronic suppurative processes, and it is good to have at hand for reference an authoritative book on the subject by the inventor of the method. The general pathology, prevention, and treatment of chronic suppuration are also dealt with in frag-

mentary, but able, fashion. After the introductory historical chapter telling of the beginning of injection for diagnostic purposes and the accidental discovery of therapeutic results after such injection, the author devotes a chapter to the general subject of abscess, sinus and fistula formation. The third and fourth chapters are devoted to the diagnostic (Beck-Roentgen) method with interesting examples of erroneous diagnosis corrected by using this method. The fifth and remaining chapters are devoted to the therapeutic effects of bismuth-paste injections.

The orthopedists were among the first to try out this new and promising method and achieved many good results. Beck does not attempt to explain the mode of curative action of this method, but gives many interesting theories of his own and others as to the possible explanation of the therapeutic results.

Chapters six to twelve, inclusive, deal with the therapeutic use of the paste in chronic suppurative processes of tubercular and non-tubercular origin in many regions; as bones and joints, abdominal organs, rectum, fecal fistulæ, empyema and lung abscess, sinuses from tubercular kidney lesions, etc. These chapters, as also those regarding the teeth, nose, ears, and accessory sinuses, cannot be reviewed in this place because of lack of space, and the reader must be referred to the book itself.

CASE-HISTORIES IN PEDIATRICS. A collection of histories of actual patients selected to illustrate the diagnosis, prognosis and treatment of the most important diseases of infancy and childhood. By John Lovett Morse, A. M., M. D., Assistant Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Children's Hospital, Boston. Octavo, 320 pp., illustrated. Price, \$3.00. Boston: W. M. Leonard, 1911.

When we look back to our college work, many of us find that the lectures we have heard have left little impression when compared with the clinical cases. In this work the case-history method is well employed to give vividness to the subject. In fact, it is almost a post-graduate course. Many of the subjects in which recent advancement has been made, are well handled, such as that of the hemorrhagic diseases of the new-born. One feels disappointed at times when the outcome of the cases is not given.

Good cases of fatty indigestion are given, but

the statements on the indigestion of protein are not convincing.

In speaking of certain extreme cases of infantile atrophy, the following statement is made: "The only treatment which offers any reasonable chance of recovery is human milk. She must have it at any cost. There is no other food which is worthy of consideration in this instance. There is nothing to be hoped from medicinal treatment." The truth of this statement is well known to practicing pediatricists, but is unfortunately frequently not so boldly stated.

It is to be regretted that no mention of lordosis is made under orthostatic albuminuria.

In the estimation of the reviewer, however, this work is one of the clearest and best adapted to instruction in pediatrics which we possess, and it can be strongly recommended both to students and practitioners. It is up to the high grade of Morse's other work.

THE PREVENTION OF SEXUAL DISEASES. By Victor C. Vecki, with an introduction by William J. Robinson, M. D. Pages, 130; price, \$1.50. The Critic and Guide Co., N. Y.

This little book contains a thesis full of plain truth, and to use an every-day expression, it puts the matter "straight from the shoulder."

The author believes that to make the prevention of sexual diseases possible there must first be absolute publicity as regards their nature, course, and their direct and indirect results. The chapter on the "Reality of the Venereal Peril," is one which should be read by every individual who has to do with the care and education of our youths. Physicians, especially those giving considerable time to the treatment of these diseases, will feel their responsibility more keenly after reading this chapter.

There is a short discourse on the important venereal diseases. These are discussed under two headings: contagious and non-contagious. Under the former we find chancroid, gonorrhea, and syphilis; under the latter, onanism, pollutions, and sexual neurasthenia.

The chapters on prostitution are very good, and stress is laid upon the examination and regulation of prostitutes.

One chapter is devoted to the government's duty towards the prevention of these diseases. Others detail the physician's duty, personal prophylaxis, and individual prophylaxis. In the chapter devoted to the individual prophylaxis,

the author first recommends abstinence; second, careful selection of mate; and, thirdly, he advises the patient to go armed, i. e., with a 2 per cent silver nitrate solution or 4 per cent protargol, 30 per cent calomel ointment, and a good lubricant.

The reviewer believes that if an individual go about this detailed preparation of first procuring and then preparing himself as directed, it ought to be sufficient, from a psychological standpoint at least, to inhibit temporarily the very impulse or tendency to act.

In view of the fact that strenuous measures are being taken at present, to prevent further infection from these diseases, this book should be given an enthusiastic reception.

REPORTS OF SOCIETIES

HENNEPIN COUNTY SOCIETY

The monthly meeting of the Society was held on March 6th, with fifty members present and Dr. Quinby, the president, in the chair. Drs. E. E. Brimmer, G. M. Jones, and Ernest P. Baker were elected members.

Dr. F. E. Todd presented a patient who had had the lower cul-de-sac obliterated and was, therefore, unable to wear a glass eye until an operation had been performed. The operation performed was that used by Dr. Weeks of New York, which produces a permanent result, allowing the patient thereafter to wear an artificial eye.

The Milk Commission brought up the matter of a bill now before the legislature to reduce the amount of butter-fat required in milk sold to the consumer. The Society delegated Dr. Haggard to appear before the legislative committee having the bill in charge to express the Society's views against such reduction.

The matter of a building for doctors received brief consideration, the architect presenting a picture of the proposed building.

Dr. Archa E. Wilcox read a paper on "Ischemic Paralysis, with the Report of a Case"; and Dr. E. K. Green read a paper on "Intubation, with Report of a Case." Both papers were discussed at some length.

Dr. L. W. Day reported a case of endocarditis, with recovery, and Dr. C. H. Bradley reported a case of trichina, seen in the City Hospital.

The President announced that Dr. F. A. Emmons, of Chicago, will be the speaker at the annual banquet.

C. H. BRADLEY, M. D., Secretary.

INTERNATIONAL COMMISSION ON CONTROL OF BOVINE TUBERCULOSIS

It seems advisable to keep the public informed in a general way concerning the work of this Commission.

A meeting of this Commission was held in Buffalo, N. Y., on February 27th. It was decided that the first task would be the preparation of material for a small pamphlet on the subject of bovine tuberculosis. This pamphlet is to be very simply and plainly worded, for the general public, especially stock owners. It is to embody a full statement of available information on the subject—so far as it concerns the stock owner in a practical way, and so far as such information is accepted by the Commission.

This primer will probably be published in very large editions in the United States and Canada, and be given very wide distribution by the Canadian and United States Governments and by our several states in this country.

The committee entrusted with the responsibility of preparing this pamphlet is Dr. V. A. Moore, Cornell University; Dr. J. R. Mohler, Federal Bureau of Animal Industry; Mr. J. J. Ferguson, representing American Packers; Dr. M. H. Reynolds, Minnesota, representing American veterinarians in state work; Dr. F. Torrance, Manitoba, representing Canadian veterinarians.

The next meeting of this commission will be held at Toronto late in August.

M. H. REYNOLDS, M. D., Secretary.

NEWS ITEMS

Dr. P. K. Dahl has given up practice at Hanska.

Dr. R. H. Monaghan is building a hospital at Crosby.

Dr. C. G. Forrest has moved from Bagley to Clearbrook.

Dr. A. A. Rankin has moved from Waconia to South Haven.

Dr. C. S. Durkee has moved from Great Bend, N. D., to Mandan, N. D.

Dr. J. F. McNulty has moved from Holdrege, Neb., to Mitchell, S. D.

Dr. John S. Renninger, of Marshall, died last month at the age of 55 years.

Dr. B. A. Wade, of Hot Springs, S. D., died last month at the age of 81 years.

Dr. C. B. Rentz who recently located in Rapid City, S. D., has moved to Rowley, Iowa.

The North Dakota State Medical Association will meet in Fargo on May 9th and 10th.

Dr. Geo. A. Crary has moved from Minnaukon, N. D., to Fingal, in the same state.

Dr. C. A. Durkee, who formerly practiced at Great Bend, N. D., has located at Shields, N. D.

Dr. C. O. Cooley, of Madelia, has sold his practice and residence to Dr. H. B. Grimes, of Lake Crystal.

Dr. J. J. Eklund, of Duluth, has been appointed by Governor Eberhart a member of the State Board of Visitors.

Dr. A. W. Brandt, of Bismarck, N. D., has been doing post-graduate work at the Polyclinic of New Orleans.

Dr. Paul E. Bowers, of Minneapolis, has been appointed medical superintendent of the prison at Michigan City, Ind.

Dr. Hugh Henry Slocumb, of Plainview, will be married on the 20th inst. to Miss May H. Willis, of Winona.

Medical examination of pupils at Williston, N. D., has given great satisfaction to the school board and the parents.

Dr. H. L. Stolpestad, who has been practicing at La Fayette for the past six years, has moved to St. Paul, his former home.

Dr. William H. Hollands, an interne in Luther Hospital of St. Paul, was married last month to Miss Kally Amundsen, of Fisher.

The State Board of Charities and Correction of South Dakota are opening today a \$10,000 tuberculosis sanitarium at Deadwood.

Dr. Rannay P. Malay, who recently removed from Yankton, S. D., to Aberdeen, S. D., died at the latter place last week, at the age of 51 years.

Dr. S. A. Zimmerman, of Valley City, N. D., was in the Twin Cities last week purchasing

surgical instruments for Riverside Hospital at that place.

Dr. Henry E. Cassel, of Litchfield, died last week at Luther Hospital, St. Paul, at the age of 51 years, from blood-poisoning following a surgical operation performed by him.

The effort to raise \$25,000 for a hospital at Glenwood has been so successful that the work will be rapidly pushed and the building will be ready for occupancy in the fall.

Drs. A. D. Macdonald, C. S. Smith, and Arthur Morrow, of Kalispell, Mont., have formed a partnership at that place. Drs. Macdonald and Smith have practiced many years in Montana.

The bill to lower medical educational standard in Minnesota, of which we spoke editorially in our last issue, received but little consideration in the legislature, as did the bill to re-establish the homeopathic college of medicine.

The Lyman County Medical Society was organized last month at Murdo, S. D. Officers were elected as follows: President, Dr. Hunt, of Draper; vice-president, Dr. Newman, of Presho; secretary, Dr. Kimble, of Murdo; treasurer, Dr. Volin, of Reliance.

Dr. A. L. McDonald, who has been professor of anatomy in the medical department of the University of North Dakota since the beginning of medical work in the University, has resigned his position to do general practice. He will still lecture in the University.

Dr. Fred C. Miller, of Olivia, died on March 19th after a brief illness from lobar pneumonia, at the age of 42 years. Dr. Miller was a graduate of Hamline University, class of 1899. He located in Olivia soon after graduation and was highly respected by the citizens of that city and locality.

Dr. J. M. Mc Masters, of Sauk Center, had occasion to remember his birthday this year. When he called at the postoffice for his mail, he was given about a bushel of postcards, which, with appropriate inscriptions, his friends sent in remembrance of his seventy years, forty of which have been spent in practice at Sauk Center.

Hibbing has a new \$10,000 detention hospital. It is a two-story building ample in size, heated by hot water, and thoroughly equipped. As a local paper remarks, "it will take the place of

REPORTED FROM 65 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS
FOR THE MONTH OF JANUARY, 1911.

VILLAGES.	Population U. S. Census of 1900	Population State Census of 1905	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Poli- myelitis	Typhoid Fever	Diarrhoeal Diseases of Children	Cancer (?)	Puerperal Septicaemia
Adrian	1,258	1,112	1													
Aitkin	1,719	1,638	1													
Akeley			0													
Appleton	1,184	1,221	*													
Belle Plaine	1,121	1,204	1													1
Bovey		1,377	0													
Browns Valley	721	1,058	1													
Buffalo	1,040	1,227	1													
Caledonia	1,175	1,372	2			2										
Cass Lake	546	2,011	*													
Chisholm		7,684	15	2		4	1							4		
Coleraine		1,613	1													
Dawson	962	1,318	0													
Delano	967	1,031	1			1										
Farmington	733	1,024	2		1			1								
Fosston	864	1,055	1													
Frazee	1,000	1,645	1													
Glenwood	1,116	2,161	3			1			1							
Grand Rapids	1,428	2,239	7	3												
Hibbing	2,481	8,832	22	1	1	1	1				1			2		2
International Falls		1,487	*													
Jackson	1,756	1,907	1													
Janesville	1,254	1,173	1													1
Kenyon	1,202	1,237	0													
Lake Crystal	1,215	1,038	2													
Long Prairie	1,385	1,250	1													
Madelia	1,272	1,273	*													
Milaca	1,204	1,102	3													
Mountain Lake	959	1,081	0													
Nashwauk		2,080	1		1											
North Mankato	939	1,279	1													
North St. Paul	1,110	1,404	3	1		1										
Osakis	917	1,013	*													
Park Rapids	1,313	1,850	0													
Pelican Rapids	1,033	1,019	0													
Perham	1,182	1,376	0													
Pine City	993	1,258	*													
Plainview	1,038	1,175	0													
Preston	1,278	1,193	0													
Princeton	1,319	1,555	*													
St. Louis Park	1,325		0													
Sandstone	1,189	1,818	0													
Sauk Rapids	1,391	1,846	3			2										1
South Stillwater	1,422	1,343	1													
Springfield	1,511	1,482	0													
Spring Valley	1,770	1,817	4													
Two Harbors	3,278	4,990	3			1	1									
Wadena	1,520	1,820	4			2										
Wells	2,017	1,755	4			1										
West Minneapolis	2,250	3,022	*													
Whalan	134	1,121	0													
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	3			1										1
Winnepago City	1,816	2,555	*													
Winthrop	813	1,043	1													
Zumbrota	1,119	1,138	1													
State Institutions			38	5	1	2		1					1		2	
Other parts of state			1038	65	12	231	9	13	3		3	1	6	24	40	5
Total for state			2181	192	33	453	30	29	4	....	11	3	17	49	106	11

*No report received. Health officer not doing his duty.

189 stillbirths and premature births not included in above totals.

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PUBLISHER'S DEPARTMENT

THE JUNE A. M. A. MEETING

The Chicago Great Western and the Santa Fe railroads will give the medical men of the Northwest who attend the A. M. A. meeting this year the most delightful trip that can be made on this continent. The trip from the Twin Cities to Kansas City will enable everyone to get acquainted with all in the party, and the trip over the Santa Fe, through the "land of enchantment," will be marked by stops at Albuquerque, Laguna, and the Grand Canyon, where things of wondrous interest and beauty are to be seen. And then the homeward trip through the Rocky Mountains of the Northwest will open the eyes of all to a country whose wonders have never been imagined by those who have not seen them.

Truly, this is a trip of a lifetime, and lucky is the physician who can take it.

For detailed particulars address C. D. Fisher, Minneapolis, or M. F. Montgomery, St. Paul, care of Chicago Great Western Railroad, and C. C. Carpenter, Metropolitan Life Building, Minneapolis, Passenger Agent of the Santa Fe Railway.

THE POTTENGER SANATORIUM

A few miles out of Los Angeles at Monrovia is one of the beauty spots of California, and the location was wisely selected for the Pottenger Sanatorium for diseases of the lungs and throat. Dr. Pottenger, its medical director, has an international reputation for his work in these lines, and his institution at Monrovia is well worth a visit from every medical man who goes to California next June for the A. M. A. meeting. The Los Angeles office of the Sanatorium is in the Union Trust Building.

THE NEW ENGLAND FURNITURE CO.

Our readers cannot fail to read the attractive announcements made by the above house in our columns, generally calling attention to separate departments in each issue. We wish especially to note the fact that the New England Co. carries a very high-grade of office and household appliances, and are the exclusive agents in the Northwest for many of the best lines of goods manufactured. They do things right at the New England, and our readers will find them most anxious to serve them in a manner that will make every doctor the friend of the house.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL

made with the Bulgarian ferment. This gives a drink much more palatable than buttermilk, and while it possesses all the good qualities of buttermilk, it is free from the putrefactive germs common to the latter.

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For information, address Dr. Mary A. Spink, Supt., Indianapolis, Ind.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL XXXI

MINNEAPOLIS, MAY 1, 1911

No. 9

W.A. JONES, M. D.,
EDITOR

W. L. KLEIN,
PUBLISHER

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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

MAY 1, 1911

THE LEGISLATURE ADJOURNS THANKS!

April 19, 1911, was a great day in Minnesota, as it marked the adjournment of the Legislature. The session was noted chiefly for the lack of organization, inexperience of members, the absence of leadership, except in the democratic minority, faction squabbles, time wasted by heated controversies, senseless investigation, and endless personalities carried to such degrees as to prohibit the passage of necessary bills. A prominent senator, in discussing the situation, said that the legislative session of 1911 was the most outrageous in the history of Minnesota.

From personal observation it looked very much as if the majority of the members were working for personal glory rather than for the interests of the State.

The various committees were frequently disorganized, were without dignity, and often did not investigate the merits of bills before them for consideration, and were seemingly indifferent to the outcome, save when the bills favored their immediate local demands.

During one of the committee meetings (the judiciary) when outsiders were invited to be present, the members strolled in and out, chatting with one another, their feet upon a table, smoking, and criticising measures of which they were wholly ignorant.

From what one can learn, the above is a fair example of the way committee work was done. Throughout the session there seemed to be no business method in the committees or in the general sessions, and it reminded the observer of a motley crowd gathered without a purpose.

If a board of directors of a commercial concern were to transact their business after the pattern of the Minnesota Legislature the whole institution would go to smash, just as the Legislature did at its adjournment. It would be far better to elect a board of directors composed of a limited number of real business and professional men from the State at large than to suffer the follies of such a legislative body as that of 1911.

The men in the house and senate who were competent to represent the wishes of the people of the State, were outclassed in numbers by incompetents, hence the business of the State was largely neglected.

The meeting of this Legislature cost the State \$370,000. Two years ago it cost \$288,000. There were 1,162 bills introduced in the house and 926 in the senate this year, and 385 were enacted into laws, as compared with 511 in 1909. How many of the 385 bills that will prove constitutional remains to be seen.

The time spent in debate over trivial incidents and horse-play covered days which might have been devoted to real work; unfortunately, the house did not know how to work.

The University fared very well; thanks to the

efforts of Senator Elwell. The State Board of Health fared badly in that only a few thousands of dollars were added to the usual budget.

Dr. Bracken, executive officer of the Board, was "investigated" by a one-man committee, then re-investigated by a real committee who vindicated him and praised him for his ability. His salary, fixed by the Board at \$5,000 per year, was cut by the committee on appropriations to \$4,000. This unjust reduction was obtained through the personal animosity of one or two men who disliked the secretary personally, which is a narrow-minded method of doing business.

The members of the State Board of Control had their salaries raised from \$3,600 to \$4,500—a just raise, but why should one official suffer from personal discrimination?

Every tuberculosis bill was lost in the shuffle except one, which permitted counties to appropriate money to prevent the spread of tuberculosis! As a number of counties are already doing that the concession was not really needed.

THE DIVISION OF FEES

For some time the medical press remained quiet on the subject of the division of fees between the specialist or surgeon and the general practitioner, but quite recently the subject has been agitated and numerous instances of fee-division have been cited. Dr. L. P. Lord, of Omaha, read a paper on the subject before the Western Surgical Association in Chicago, December 18, 1910. An editorial in *Colorado Medicine*, February, 1911, goes deeply into the subject and presents arguments that should be read by every practitioner.

The *Denver Times* comments on "fee-splitting," and claims to have obtained the names of men engaged in this practice. The investigation inaugurated by the *Denver Times* is going on, and that paper says that when their list is tolerably complete they will print it and gladly face all libel suits that such publication may involve.

It is almost unbelievable that an educated medical man, surgeon, specialist, or practitioner need be reminded that the practice is dishonest from every point of view.

A reputable medical man who has occasion to meet the younger medical men says that he found two recent graduates who told him of receiving commissions and were ignorant, or at least they claimed to be ignorant, of any wrong-doing. A third man spoke of receiving commissions open-

ly and said it was a common practice, and he proposed to profit by it! The men in the larger cities claim that the practice is abating, but this is a debatable point. The danger-zones lie in the country where small surgical hospitals exist in the midst of rising country practitioners. It seems incredible that this form of graft cannot be eliminated, but the temptation on both sides is often very great and resistance difficult. It is a form of intoxication, money-getting, that becomes a habit, and no matter how much is written on the subject the practice becomes infectious.

The only remedy is publicity, and if other papers follow the example of the *Denver Times* there will be consternation in the commission camp. Exposure of the names of men commonly accredited with commission-splitting would ruin a few ambitious surgeons.

The method of fee-division is various according to individual preference. Some surgeons send the practitioner a check for assisting at an operation, while, as a matter of fact, the "assistant" would not be permitted to approach the operating-table. Some country doctors collect a good fee from the patient and then pay the surgeon what they please, and not infrequently the surgeon pockets his share with a wry face. If these methods fail, other secret ways will be found, but the time will come when all men must abandon it, and come out openly for a just and compensatory fee for both physician and surgeon. Fee-dividers and fee-receivers usually part in anger, for one or the other becomes greedy in time.

The system as practiced today is dishonest, debasing, demoralizing, and destructive to medical morals. Such commercialism should be replaced by business methods to which the patient or his friends can be frankly invited; then no misunderstandings will arise, and the profession will once more be placed on a dignified basis. The physician must charge more for his services, and the public must understand that the family doctor is entitled to larger fees, because he gives more time and attention to the diagnosis and treatment than he did in former years when he was not so well equipped to render valuable service.

With these few remarks, let us pray that doctors may be more honest in their dealings with each other and with the patients.

A PROBLEM FOR ANTIVACCINATIONISTS

What can the antivaccinationists say to the facts developed in dealing with smallpox in the Philippines, where all extraneous causes are eliminated, the results standing out so clear that the veriest tyro in the science of disease cannot question them?

The following is an abstract of a paper on "Vaccination in the Philippines," published by Dr. Robert Olesen in the Journal of the A. M. A. for March 4th:

Dr. Robert Olesen shows the benefit of vaccination against smallpox in the Philippine Islands. Of Manila, for example, he says that under the Spanish rule the death-rate from smallpox was often 400 during one week. With the advent of the Americans and their policy of persistent vaccination, a startling reduction in the number of cases and deaths from smallpox became apparent. Only once (in 1908) in the past ten years has the annual number of deaths in Manila from this disease exceeded thirty. During 1905-6-7 there were but eight deaths. In 1908, following a two years' suspension of vaccination, there was a sharp epidemic, in which a number of ardent antivaccinationists paid the penalty of their belief with their lives. No death from smallpox has occurred in Manila since June 15, 1909. During July, 1909, there were twenty-one deaths from smallpox in the city of Iloilo, which ranks next in importance to Manila. At that time the sanitary administration was notoriously lax. Representations to the provincial authorities that human life was being unnecessarily sacrificed resulted in an active campaign of vaccination. During August, when the work began, twelve deaths were reported; during September, eight, and in October, one. Since that time there has been but one case of varioloid in the entire city and the new district health officer is able to direct his attention to some of the much needed sanitary improvements.

Systematic vaccination was begun in the Province of Ambos Camarines in September, 1906. The result was as follows: third quarter, 1906, 280 deaths; fourth quarter, 1906, eighty deaths; first quarter, 1907, eight deaths; later to date, no deaths. In this province four vaccinators are constantly employed in inoculating the infants and transients, thus reducing to a minimum the opportunity for the reappearance of smallpox.

In 1904 and 1905 there were 446 deaths from smallpox in Pampanga Province. In 1906 vaccination was begun with some degree of regularity and was followed by exceedingly happy results: 1906, thirty-five deaths; 1907, fourteen deaths; 1908, no deaths; 1909, no deaths.

The experience with vaccination in the Island of Cebu, which is the most densely populated section in the archipelago, is extremely interesting. Prior to 1905 there was an annual death-rate from smallpox of between 3,000 and 4,000. Following the wholesale vaccination of 1905-1906 there was a reduction in the mortality to ninety-four deaths in 1907 and eighty-four deaths in 1908. Unfortunately, vaccination was suspended during 1907 and 1908. In 1909 there was an in-

crease in the mortality to 736. As a result of this recrudescence the unprotected children were vaccinated and a large portion of the general population revaccinated.

ARE YOU GOING TO A. M. A. MEETING?

The trip to California will be a long and profitable one, but it may not be pleasant for those who do not make early reservations on the sleeping cars. The railroads will do all they can even for the late comers, but as there will be eight or more special trains out of Kansas City to accommodate the physicians going that way, it is quite possible, if, indeed, not quite probable, that the unannounced crowd will be so large that the railroads cannot give all equally good accommodations.

If you expect to attend the meeting, you should *at once* write to the St. Paul or Minneapolis office of the Chicago Great Western Railroad or to C. C. Carpenter, Pass. Agt., of the Santa Fe Line, Minneapolis.

BOOK NOTICES

A TEXT-BOOK OF BACTERIOLOGY, a Practical Treatise for Students and Practitioners of Medicine. By Philip Hanson Hiss, Jr., M. D., Professor of Bacteriology, College of Physicians and Surgeons, Columbia University, New York City, and Hans Zinsser, M. D., Associate Professor in Charge of Bacteriology, Leland Stanford, Jr., University, Palo Alto, California. Cloth, pp. 746, with 156 illustrations in the text, some of which are colored. D. Appleton & Co., New York and London, 1910.

A most excellent "treatise on the fundamental laws and technic of bacteriology," written by men with broad enough experience to enable them to realize that the essential "point of approach" is through the "study of bacteria in their relation to disease processes in man and animals."

The fifty-four chapters are divided into five sections as follows:

Section 1.—The General Biology of Bacteria and the Technic of Bacteriological Study.

Section 2.—Infection and Immunity.

Section 3.—Pathogenic Microorganisms.

Section 4.—Diseases of Unknown Etiology.

Section 5.—Bacteria in Air, Soil, Water and Milk.

The thoroughness with which the authors go into their subject makes the book only the more entertaining. The chapters on "Toxins and Antitoxins"; "Lysins, Agglutinins, Precipitins, and other Anti-bodies"; "Anaphylaxis and Hypersusceptibility," and the whole of Sec. 4, make it a most useful, up-to-date reference book.

DIFFERENTIAL DIAGNOSIS. Presented through an Analysis of 383 cases. By Richard C. Cabot, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo, 753 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

We are not surprised that the first edition of this book was sold in four weeks. We know of no other book so much needed in every physician's library.

Dr. Cabot presents the subject of differential diagnosis in the only really practical way. He follows the method of "case-teaching," a method which he has used for eight years in his classes in the Harvard Medical School.

He states that the book is an attempt to study medicine from the point of view of the presenting symptom. This presenting symptom is the chief symptom of which the patient complains when he comes to his physician, and it is made the working basis of diagnosis. He thus follows the same course of procedure by which he examines a patient in his office. Beginning with the presenting symptoms, he works inward and backward "to the causes, the organic lesions, the evolution, probable outcome, and rational treatment of the case."

As presenting symptoms most often complained of by patients, Dr. Cabot chooses headache, lumbar pain, general abdominal pain, right hypochondriac pain, pain in the left hypochondrium, right iliac pain, left iliac pain, axillary pain, pain in the arms, pain in the legs and feet, fevers, chills, coma, convulsions, weakness, cough, vomiting, hematuria, dyspnea, jaundice, and nervousness. Each of these symptoms is made the subject of a chapter and is illustrated with a large number of cases. He selects for study 383 actual cases, all of which he has personally seen and studied. No case is chosen in which the diagnosis is easy, and in none is the diagnosis impossible.

The book contains numerous excellent figures, tables, charts, and a series of remarkable diagrams. Each chapter begins with a general dis-

cussion of the presenting symptom of which that chapter treats, and following the discussion is a very instructive diagram which gives a graphic estimate of the relative frequency of the commoner causes of each presenting symptom based upon the study of a large number of actual cases.

The charts show, in addition to the ordinary temperature, pulse, and respiration lines, a fourth and fifth line, representing, respectively, the twenty-four-hour amount of urine in ounces and the blood-pressure.

The history of each case is presented, together with the physical examination and laboratory findings. Then follow the discussion of the case and the outcome with the final diagnosis.

The book presents the cases just as we meet them at the bedside and shows us the process of reasoning which we ought to follow before we make our conclusions as to which of a number of probable causes is the real cause of the patient's illness.

The chapter on lumbar pain is of especial interest. Sacro-iliac disease is shown to be the commonest cause of this symptom. Dr. Cabot upsets some of our old ideas when he shows conclusively that backache and pelvic disease are mutually independent.

It is a book which we can carry about with us and read by snatches on the cars. We shall want to read every word of it and re-read much of it many times. It will be more generally useful to many of us than any other medical book which we possess. We hope that Dr. Cabot will follow it with a second volume treating of the symptoms which he says he now omits because of lack of space.

GOLDEN RULE OF DIAGNOSIS AND TREATMENT OF DISEASES. By Henry A. Cables, B. S., M. D., St. Louis: C. V. Mosby Co., 1911.

This little book is an original treatment of an old subject, and, as the author states in his preface, is "a book of ready reference of diagnosis, treatment, and remedial procedure."

It consists of short, terse sentences and paragraphs, designed to impress the important points and let the minor details go by the board.

There are several minor faults, as, for instance, the absence of metric equivalents in prescriptions and the tendency towards shot-gun prescriptions; while under "Cancer of the Stomach," the statement, "Remember that tumor can be palpated in three-fourths of the cases," is, at least, open to doubt.

The Latin of the prescriptions is unusually excellent, the only mistake detected being the use of *hyoscyaminae* for "hyoscyami."

"Golden Rules" is the best of the shorter works on diagnosis published in a long time. Its concise, meaty paragraphs are filled with valuable information, bared of unnecessary detail. We heartily recommend it to those desiring a short reliable work on diagnosis and treatment.

EDUCATION IN SEXUAL PHYSIOLOGY AND HYGIENE. By Philip Zenner, M. D., Professor of Neurology in the Medical Department of the University of Cincinnati: The Robert Clarke Company, 1910.

This little book of Zenner's was evolved from a series of experimental lectures delivered in one of the Cincinnati public schools. The reception of these was so favorable that the author has, fortunately, put them into book form, so that they may be available for wider distribution. Their essential object is to teach, in a wholesome manner, the necessary facts concerning sexual relations, with the ultimate end of the prevention of disease.

Encouraged by his first success the author has added, in other chapters, addresses suitable for college students, and has further enlarged his book by adding chapters on "The Mode of Teaching," "The Teacher," and "An Added Word."

A HANDBOOK OF PRACTICAL TREATMENT. In three volumes. By 79 eminent specialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M. D., Assistant Professor of Medicine, University of Pennsylvania. Volume 1: Octavo of 900 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume: cloth, \$6.00 net; half morocco, \$7.50 net.

There is no doubt that the modern tendency in medicine is much more to the science than to the art, though the latter must be, to practicing physicians, their chief immediate concern. It is with the idea of aiding the latter that this hand-book of practical treatment has been prepared.

Few text-books of medicine give a very great amount of attention to the treatment of diseases, and much of what is available concerning the matter is found scattered in many places. That the physician may find in this hand-book "a repository of the best, most modern, and advanced

views in regard to the management of diseased states," is the aim of the authors.

Like all other composite books it has necessarily certain weak points, but the excellence of the contributions and the care exercised in editing have eliminated many of these.

The opening chapter on "Fundamental Principles of Therapeutics" is by Musser, and it gives an excellent idea of the underlying facts on which therapy is based. In a review it is impossible even to mention the headings of all the chapters, but certain ones are deserving of special consideration. One of the very best chapters in the book is that on "General Principles of Dietetics," by Dr. David L. Edsall. This article is thorough and comprehensive and contains, among other things, the general principles of dietetics, the method of preparation of food, and a table of caloric values of different foods. Everything is discussed in a practical way and this chapter alone makes the book a valuable contribution.

Dr. Hektoen's article on the "General Principles of Serum-Therapy" is particularly timely just now, when so much attention is devoted to the subject of serum treatment of disease.

The chapter on "Exercise, Massage, and Mechanotherapy," by Dr. R. Tait McKenzie, covers the ground fully and is especially well illustrated, and, like the article on dietetics, it deals with matters of which the average physician knows all too little, and which are not usually found in text-books.

Hinsdale's article on "Hydrotherapy and Balneotherapy" covers seventy-seven pages, and, like the most of the other chapters, is excellent, not alone from a scientific standpoint, but it is also most useful in that the full details of each method described are given, so that anyone who reads may follow out the procedure prescribed. The book is well printed in large, clear type, and if the present volume is an indication of others to follow this system of practical treatment is much superior to anything else available on the same subject, and should be in the hands of all practicing physicians.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Town and Country Club, St. Paul, Wednesday evening, April 5.

After dinner the meeting was called to order

by President S. Marx White.

Dr. W. N. Porteous, of Minneapolis, read a paper on, "Hay Fever, Its Name and Its Nature." It was discussed by Dr. H. L. Taylor, and by Dr. Porteous in closing.

Dr. A. W. Abbott reported the case of a patient who died after nitrous oxide anesthesia, the patient living thirteen hours under artificial respiration. The heart was active, but no voluntary or involuntary action was noted in the patient during that period. No urine was secreted during the thirteen hours.

Dr. A. E. Benjamin reported the case of a patient operated on that morning, a retroperitoneal sarcoma.

Dr. T. W. Stumm, of St. Paul, read his inaugural thesis, "Septic Endocarditis." It was discussed by Drs. Gilfillan, Staples, White, Tomlinson, Westbrook, and by Dr. Stumm.

JOHN M. ARMSTRONG, M. D.,
Secretary *pro tem*.

HENNEPIN COUNTY SOCIETY.

The Society held its regular meeting April 3, with thirty members present.

It was moved that the Hennepin County Medical Society in meeting convened memorialize the Minnesota State Board of Medical Examiners to investigate the case of Dr. Curran W. Higgins, of Minneapolis, Minnesota, and if the said Board finds that the circumstances warrant, to revoke the license of said Curran W. Higgins forthwith; that the Secretary be instructed to forward this memorial to the State Board.

The Committee on Necrology reported as follows:

Dr. J. C. Cockburn, the eldest son of Robert and Susan Cockburn, was born October 24, 1842, in Elmsville, New Brunswick. He received his primary education in Provincial Normal School, of St. Johns, New Brunswick. When a boy he taught school for several years in Campobello, Maine. When there he took up the study of medicine, with Dr. Tupper, and completed his course in Harvard University, graduating in 1872. After graduating he spent two years in the hospital at Concord, N. H. He went to Canterbury, N. H., where he practiced until he came west.

He was married to Miss Anna Clark, in November, 1878; came to Minnesota in 1879; settled in Zumbrota, and practiced there for one year, coming to Minneapolis in 1881, where he has been in active practice ever since.

He was City Physician for several years, also Health Commissioner from 1882 to 1884. He was Professor of Physiology and Nervous Disease in the Hamline University from 1887 to 1889, and President of the Hennepin County Medical Society.

He was an active member of the Masonic, Odd Fellows, Royal Arcanum and Workmen Orders. He died February 5, 1911.

The Hennepin County Medical Society, appreciating the sterling qualities and high character of a departed member and friend, feels that any eulogy it might express would fall far short of his deserts, but we reflect with gratitude at this time upon the helpfulness of his presence among us and his usefulness and comfort to the afflicted while he lived. We miss our former president and member, Dr. J. C. Cockburn, and desire to express to the members of his family our sincere sympathy.

DR. G. W. BASS,
DR. A. E. HEDBACK,
DR. G. DAZIEL,

Committee.

Dr. J. D. Lewis was elected to membership on his transfer card.

A communication from the Riverside (California) County Medical Association was read as follows:

There is every indication that the 1911 meeting of the American Medical Association, not only from a professional and scientific point of view, but in the elaborateness of the entertainment provided, will be the most conspicuous success in the history of the Association. Los Angeles is sparing neither labor nor expense to make this meeting epochal, and Riverside, though sixty miles away, is fully co-operating.

Will you kindly read this letter at the next meeting of your society, calling the attention of those of your members who are planning to attend this meeting to the fact that stop-over privileges are granted on all railroad tickets, affording them an opportunity to visit Riverside, the center of the greatest orange growing district in the world. For the nominal charge of \$1.00 they may take an automobile ride through fifteen miles of orange groves; over the two most famous drives in the United States—Magnolia Avenue and Victoria Avenue—enjoy the Mt. Rubidoux scenic drive; visit the Glenwood Mission Inn, which travelers agree is the most unique hotel in the world; and see and enjoy all those features which have made Southern California the world's favorite resort as exemplified in its best type of city.

Dr. C. A. Reed read a paper on "The Operative Treatment of Paralytic Deformities," and Dr. H. D. Newkirk read one on "Enteritis in Infants and Its Dietetic Treatment." Both the papers were discussed at length.

C. H. BRADLEY, M. D., Secretary.

WASHINGTON COUNTY SOCIETY

The Society met at Stillwater on March 14, with six members present.

Dr. G. A. Newman, Stillwater, read a paper, a "Report on a Series of Confinement Cases."

The following were elected officers:

President, Dr. E. O'B. Freligh, Stillwater; 1st vice-president, Dr. J. H. Haines, Stillwater; 2d vice-president, Dr. F. A. Stevens, Lake Elmo; secretary-treasurer, Dr. W. R. Humphrey, Stillwater; censor for three years, Dr. B. J. Merrill, Stillwater; delegate to the State Association, Dr. E. E. Wells, Stillwater; alternate, Dr. D. Kalinoff, Stillwater.

W. R. HUMPHREY, M. D., Secretary.

PARK REGION DISTRICT AND COUNTY SOCIETY

The Society met at Fergus Falls, April 12, with twenty members present.

The following papers were read: "Diseases of the Eye in their Relation to General Diseases," by Dr. J. A. Freeborn, Fergus Falls; "Some of the Most Common Poisons," by Dr. A. M. Randall, Ashby; "Experience as a Teacher in Professional Life," by Dr. A. B. Cole, Fergus Falls; "Law and the Doctor," by Hon. M. J. Daly, Perham.

Dr. Ralph St. J. Perry was elected to membership.

L. A. DAVIS, M. D., Secretary.

WINONA COUNTY SOCIETY

The regular meeting of the Winona County Medical Society was held in Winona on April 4.

Dr. Steinbach read extracts from the recent literature on Salvarsan, and Dr. Munger read an essay on "Rheumatism," dealing especially with its etiology and treatment.

H. F. MCGAUGHEY, M. D., Secretary.

MOWER COUNTY MEDICAL SOCIETY

The regular quarterly meeting of this Society was devoted to a discussion of the necessity of a revision of the fee-bill, and the presentation of some interesting clinical material on the eye, by Dr. G. M. F. Rogers: "Some End-results of Emergency Surgery," by Dr. C. C. Leck; "Myositis Ossificans," by Dr. C. F. Lewis, and "Skiagraphy," by Dr. A. N. Collins. The attendance was small.

CLIFFORD C. LECK, M. D., Secretary.

CLAY-BECKER COUNTY SOCIETY

The Society met at Moorhead on April 24th, with eleven members and one guest present.

The following papers were read: "Eczema of the External Ear," Dr. V. E. Verne, Moorhead; "Gonorrhea Chronica," by Dr. A. J. Kaess, Fargo, N. D.; "Asthma," by Dr. L. M. Lowe, Glyndon.

A banquet was served at the home of Dr. W. J. Awty, and a profitable and enjoyable meeting was held.

E. R. BARTON, M. D., Secretary.

NEWS ITEMS

Dr. H. L. Stolpestad, of Lafayette, has moved to St. Paul.

Dr. Samuel M. Jenks, of Madison, N. D., died last month at the age of 63 years.

Dr. E. Angermeir, of Duluth, was fined last month \$100 for practicing without a license.

Dr. E. R. Jellison, of Foley, was married last month to Miss Marie Stapleton, of St. Paul.

Dr. J. W. Stribling, of New England, N. D., has moved into his enlarged and remodeled hospital.

Dr. J. J. Donovan, of Eden Valley, has moved to Litchfield, and occupies the offices of the late Dr. Cassell.

Dr. O. E. Heimark, of Hawley, who has been doing post-graduate work in Chicago for some months, has located at Duluth.

Drs. W. J. Mayo and Christopher Graham, of Rochester, with members of their families and friends, are touring Switzerland.

Dr. J. D. Taylor, of Grand Forks, N. D., has returned from his trip abroad. Dr. Taylor visited the principal clinics of Europe during his trip.

Work on the St. Louis County Tuberculosis Sanitarium will be begun very soon. The plans were made by a firm of architects of Saranac Lake, N. Y.

Dr. Walter Courtney, surgeon of the N. P. Hospital at Brainerd, was taken sick while on a visit to Florida, and was operated on in Cleveland, Ohio.

Dr. W. Olson, who has been connected with the City and County Hospital of St. Paul, has located at Lafayette, and will take the practice of Dr. Stolpestad.

The principal contracts for building the new hospital at Albert Lea have been let, and they amount to \$33,000. The building complete will cost over \$40,000.

Bethesda Hospital of Willmar was opened last months, Drs. Christian Johnson, John Jacobs, and H. E. Frost constituting the staff. The hospital is open to all physicians.

Dr. John A. Steele, one of the oldest Homeopathic physicians in the State, died in Minneapolis last month, at the age of 74 years. He came to Minneapolis in 1878.

The German Baptists of South and North Dakota announce that they will spend \$200,000 in enlarging the Samaritan Hospital of Aberdeen, S. D., which they recently purchased.

The citizens' committee of Kalispell, Montana, has raised \$20,000 for the new \$40,000 hospital to be built and placed under the supervision of the Sisters of Mercy, who also raised \$20,000 for the hospital.

Dr. John H. Vallancey, a graduate of P. & S., Chicago, has taken the practice of Dr. W. M. Hotchkiss, at New Rockford, N. D., the latter going to Jamestown, as superintendent of the State Hospital.

One of the "United Doctors," who have carried on an extensive business in the Northwest, was fined \$50 last month at Grand Forks, N. D., under the new act passed in that state by the last legislature, and known as H. B. 100.

Ramsey County Medical Society received the following into membership at its last meeting: Drs. Geo. C. Dittman, C. L. Larsen, Justus Ohage, Jr., and L. E. Daugherty, all of St. Paul. The Society will have new quarters on the thirteenth floor of the Lowry Building, now under construction.

Dr. E. C. Adams, the president of a proprietary medicine company of Duluth, died last month from the effect of chloroform taken for suicidal purposes. Dr. Adams is said to have been a professor at the Northwestern University of Chicago some years ago.

The medical inspectors of the Duluth schools are sending many children with eye, ear, nose, and throat defects, to the specialists, first obtaining the consent of the parents. In case of children with parents too poor to pay the cost of treatment, the specialists do the work free.

PHYSICIAN WANTED

Good opening for a capable young doctor (anti-saloon man and active Christian preferred) in a progressive town in the middle West. For particulars address D. M., care of this office.

APPARATUS FOR SALE

One Bausch & Lomb microscope in case. Three objectives, including 1-12-inch oil-immersion, two eye-pieces and glass jar cover. Good as new. One Allison table complete with stirrups, leg-holders, arm-holder, and leather cushion. As good as new. Highly polished oak. One Allison combination-cabinet, style 60D. Nearly new. Cost \$70.00. Highly polished quarter-sawed oak. An elegant cabinet for a physician. One Globe 5-bottle nebulizer with T pump and air-tank. One office-desk and chair. One good book-case. This entire outfit must be sold at once. \$175.00 takes it. Worth twice that much. This surely is a snap for some young physician just starting in practice. Address R. W., care of this office.

PRACTICE FOR SALE

A \$3,000 unopposed medical practice with small drug-stock of about \$2,000, 10 miles to the nearest doctor or drug-store; population, Scandinavian, German, and Americans. Owing to illness I am obliged to quit practice. Address H. W., care of this office.

FOR SALE—STATIC ELECTRICAL MACHINE

A 24-plate, static electrical machine, with motor, rheostat, electrodes, and all appurtenances, with stand and platform in oak. A fine instrument in practically perfect condition. Cost, \$375. I will send it for \$100. Address H. S. M., care of this office.

PRACTICE FOR SALE

Practice in good South Dakota town, pays \$3,500 a year. Will sell practice and residence for \$3,000; one-fourth or one-third down. House has six rooms; is nearly new and modern; lot is best in town. Best of reasons for selling; opening a fine one! Address D. N., care of this office.

PHYSICIAN WANTED

A regular practicing physician is wanted in a small North Dakota town; former doctor's practice amounted to \$2,000 a year; no other doctor in the place. One who can speak German is preferred. For further particulars address R. W. Weiss, Great Bend, N. D.

PRACTICE FOR SALE

A \$4,000 practice in a Minnesota city of 6,000 people, is offered for sale, together with the seller's office furniture, for \$1,200 cash. Good schools, hospital facilities, and a prosperous people—no bad accounts. Must sell before June 1st, or offer will be withdrawn. Address O. C., care of this office.

Minnesota State Medical Association

DISTRICT AND COUNTY ROSTER

APRIL, 1911

FIRST DISTRICT

COUNCILOR, C. E. DAMPIER.....Crookston

Clay-Becker County Medical Society

Regular meetings, last Monday in January, April, July, and October

Annual meeting in January

PRESIDENT

Lowe, L. M.....Glyndon

SECRETARY

Barton, E. R.....Frazee

Aborn, W. H.....Dilworth

Adkins, C. M.....Ogema

Alexander, F. H.....Barnesville

Awty, W. J.....Moorhead

Bloom, C. J.....Mora

Carman, J. B.....Detroit

Carman, J. E.....Detroit

Darrow, Daniel C.....Moorhead

Estrem, C. O.....Detroit

Hagen, Ole J.....Moorhead

Heimark, O. E.....Duluth

Hoit, Edward E.....Detroit

Humphrey, E. W.....Moorhead

Jones, S. S.....Frazee

Kaess, A. J.....Fargo, N. D.

Kierland, P. E.....Mahnomen

Kirmse, G. W.....Frazee

Meighen, J. W.....Ulen

Ogden, Emma K.....Detroit

Richards, Polk.....White Earth

Smith, M. B.....Lake Park

Smith, S. W.....Benson

Verne, V. E.....Moorhead

Weeks, L. C.....Detroit

Park Region District and County Medical Society

Wilkin, Otter Tail, Douglas, and Grant Counties

Regular meetings, second Wednesday in January, April, July, and October

Annual meeting in January

PRESIDENT

Haugan, O. M.....Fergus Falls

SECRETARY

Davis, L. A.....Dalton

Armstrong, L. W.....Breckenridge

Baker, A. C.....Fergus Falls

Berthold, J. L.....Perham

Burnap, W. L.....Pelican Rapids

Coleman, Fred B.....Carlos

Esser, John.....Perham

Freeborn, J. A.....Fergus Falls

Gilkinson, A. J.....Osakis

Gosslee, A. F.....Deer Creek

Hand, W. R.....Wendell

Haskell, A. D.....Alexandria

Haugen, G. T.....Battle Lake

Kittelson, T. N.....Fergus Falls

Leibold, H. H.....Parker's Prairie

Lester, C. H.....Alexandria

Lyng, John A.....Alexandria

McLean, T. N.....Fergus Falls

Meckstroth, C. W.....Brandon

Ohrbom, Torst.....New York Mills

Perry, Ralph St. J.....Parker's Prairie

Powers, F. W.....Barrett

Randall, A. M.....Ashby

Serkland, J. C.....Rothsay

Sherping, O. Th.....Fergus Falls

Titus, J. H.....Osakis

Vigen, J. G.....Fergus Falls

Vinje, Syver.....Henning

Red River Valley Medical Society

Polk, Marshall, Kittson, Roseau, and Norman Counties

Regular meetings, fourth Tuesday in the fourth week of every third month

Annual meeting in January

PRESIDENT

Morley, G. A.....Crookston

SECRETARY

Norman, J. F.....Crookston

Anderson, W. S.....Warren

Arneson, Thomas.....Kennedy

Bertelson, O. L.....Crookston

Bratrud, Theodore.....Warren

Briggs, F. W.....Hendrum

Dampier, C. E.....Crookston

Dryden, F. M.....Crookston

Dunlop, A. H.....Crookston

Gambell, F. H.....Thief River Falls

Hamel, C. E.....McIntosh

Hansen, Marius.....Hendrum

Heimark, J. H.....Gary

Hendrickson, J. F.....Fertile

Hodgson, H. H.....Crookston

Holbe, H.....Crookston

Hollands, Wm.....Fisher

Kjelland, J. S.....Crookston

Lemieux, Israel.....Red Lake Falls

Johnson, Einer W.....Bemidji

Melby, O. F.....Thief River Falls

Muir, J. B.....Hallock

Nelson, H. E.....Crookston

Neraal, P. O.....Cannon City, Colo.

Ohnstad, J.....McIntosh

Olson, O. H.....Erskine

Randolph, Wilson.....Crookston

Smith, H. W.....Crookston

Stuhr, H. C.....Argyle

Swanson, Cephas.....St. Hilaire

Swedenburg, A. W.....

Thief River Falls

Watson, N. M.....Red Lake Falls

Wattam, G. S.....Warren

Wilkinson, J. C.....Red Lake Falls

West Central Minnesota Medical Society

Pope, Stevens, Traverse, and Big Stone Counties

Regular meetings, second Wednesday in January, April, July, and October

Annual meeting in January

PRESIDENT

Oliver, C. I.....Graceville

SECRETARY

Hulburd, H. L.....Morris

Bolsta, Charles.....Ortonville

Caine, C. E.....Morris

Christenson, C. R.....Starbuck

Eberlin, E. A.....Glenwood

Elsey, J. R.....Glenwood

Ewing, C. F.....Wheaton

Fjelstad, C. A.....Glenwood

Fleming, A. S.....Wheaton

Gibbon, L. L.....Lowry

Karn, B. R.....Ortonville

Karn, J.....Ortonville

Leland, J. T.....Herman

Leuty, Amos.....Morris

Linde, Herman.....Cyrus

Randall, B. M.....Graceville

Ransom, M. L.....Hancock

Schons, Edward.....Graceville

Weir, J. D.....Beardsley

Whittemore, J. G.....Donnelly

SECOND DISTRICT

COUNCILOR, J. G. MILLSPAUGH.....Little Falls

Aitkin County Medical Society

Regular meetings, first Monday in each month

Annual meeting in October

PRESIDENT

Graves, CarltonAitkin

SECRETARY

Magnusson, H. V.....Aitkin

Catin, T. J.....Palisade

Kelly, B. W.....Aitkin

Magnusson, G. A.....Minneapolis

Ratchliffe, J. J.....Aitkin

Upper Mississippi Medical Society

Beltrami, Cass, Crow Wing, Hubbard, Morrison, Todd, Wadena, and Itasca Counties

Regular meetings, first Tuesday in January, April, July, and October

Annual meeting in January

PRESIDENT

Kenyon, Paul E.....Wadena

SECRETARY

Lowthian, G. H.....Akeley

Ratcheller, Oliver T.....Brainerd

Beise, R. A.....Brainerd

Christie, George R.....Long Prairie

Corrigan, J. E.....Spooner

Coulter, Charles F.....Wadena

Courtney, WalterBrainerd

Desmond, M. A.....Akeley

Fortier, E. L.....Little Falls

Gilmore, R. T.....Bemidji

Groves, A. F.....Brainerd

Hall, Elmer E.....Little Falls

Hemstead, Bert E.....Brainerd

Hemstead, W.Brainerd

Holst, C. F.....Little Falls

Holst, J. B.....Little Falls

Ide, A. W.....Brainerd

Johnson, Oscar V.....Sebek

Knickerbocker, Frank H.Staules

Koch, J. C.....Blackduck

Marclev, W. J.....Minneapolis

Miller, W. A.....New York Mills

Millspaugh, J. G.....Little Falls

Morell, W. N.....Verndale

Nicholson, JosephBrainerd

Parrott, B. W.....Long Prairie

Reid, WilliamDeer Wood

Reimstad, C. S.....Brainerd

Roberts, L. M.....Little Falls

Smith, E. H.....Bemidji

Sykora, F. J.....Brainerd

Thabes, J. A.....Brainerd

Trace, O. C.....Clear Lake

Van Valkenberg, B. F., Long Prairie

Wilcox, F. L.....Walker

Will, W. W.....Bertha

THIRD DISTRICT

COUNCILOR, J. L. ROTHROCK.....St. Paul

Ramsey County Medical Society

Regular meetings, last Monday of each month except July and August

Annual meeting in January

PRESIDENT

Gilfillan, J. S.....St. Paul

SECRETARY

Leavitt, Frederick E.....St. Paul

Abbott, E. J.....St. Paul

Allen, MasonSt. Paul

Ancker, A. B.....St. Paul

Armstrong, J. M.....St. Paul

Bacon, Knox.....St. Paul

Bacon, L. C.....St. Paul

Balcome, F. E.....St. Paul

Ball, C. R.....St. Paul

Barringer, Paul E.....St. Paul

Barsness, Nellie.....St. Paul

Beadie, W. D.....St. Paul

Beaudoux, H. A.....St. Paul

Beckley, F. L.....St. Paul

Benepe, L. M.....St. Paul

Bennion, P. H.....St. Paul

Bettingen, J. W.....St. Paul

B'ohland, E. H.....St. Paul

Rock, R. A.....St. Paul

Boeckmann, EdouardSt. Paul

Boeckmann, EgilSt. Paul

Boxell, C. E.....St. Paul

Bray, E. R.....St. Paul

Bristol, L. D.....St. Paul

Brooks, D. F.....St. Paul

Brown, E. J.....St. Paul

Brown, S. E.....St. Paul

Buckley, E. W.....St. Paul

Burch, F. E.....St. Paul

Caldwell, D. K.....St. Paul

Cameron, J. A.....St. Paul

Campbell, E. P.....St. Paul

Campbell, J. E.....St. Paul

Cannon, HarrySt. Paul

Carman, Chas. L.....St. Paul

Cavanaugh, J. O.....St. Paul

Chamberlin, J. W.....St. Paul

Charpentier, A. A.....St. Paul

Christison, J. T.....St. Paul

Colvin, A. R.....St. Paul

Comstock, A. E.....St. Paul

Cook, Paul B.....St. Paul

Coon, Geo. M.....St. Paul

Cuff, W. S.....St. Paul

Darling, J. B.....St. Paul

Laugherty, L. E.....St. Paul

Davis, H. W.....St. Paul

Davis, William.....St. Paul

Dennis, W. A.....St. Paul

Denny, C. F.....St. Paul

Dinwoodie, W.St. Paul

Dittman, Geo. C.....St. Paul

Dodge, W. M.....Farmington

Dohm, A. J.....St. Paul

Dunning, A. W.....St. Paul

Earl, George A.....St. Paul

Earl, R. O.....St. Paul

Eschelby, E. C.....St. Paul

Ferguson, J. C.....St. Paul

Flagg, S. D.....St. Paul

Foster, BurnsideSt. Paul

Francis, S. O.....White Bear

Freeman, CharlesSt. Paul

Fullerton, W. S.....St. Paul

Fulton, J. E.....St. Paul

Ghent, M. M.....St. Paul

Gillette, A. J.....St. Paul

Goltz, E. V.....St. Paul

Goodrich, JuddSt. Paul

Gravelle, J. M. A.....St. Paul

Greene, Charles L.....St. Paul

Hall, A. R.....St. Paul

Hallenbeck, D. F.....St. Paul

Hammes, E.....St. Paul

Hammond, J. F.....St. Paul

Harding, J. C.....St. Paul

Hawkins, V. J.....St. Paul

Heath, A. C.....St. Paul

Henderson, A. Powell River, B. C.

Hensel, Charles N.....St. Paul

Hesselgrave, S. S.....St. Paul

Hilger, D. D.....St. Paul

Hoff, Peder A.....St. Paul

Holcomb, O. W.....St. Paul

Hopkins, Mary P.....White Bear

Hunt, H. E.....St. Paul

Johnson, Asa M.....St. Paul

Johnson, H. C.....St. Paul

Kannary, E. L.....St. Paul

Kean, A. P.....St. Paul

Kistler, A. S.....St. Paul

Lalonde, EdmondSt. Paul

Lankester, HowardSt. Paul

Larsen, C. L.....St. Paul

Lerche, Wm.....St. Paul

Lewis, W. W.....St. Paul

Little, W. J.....St. Paul

Lufkin, H. M.....St. Paul

Lundholm, E. M.....St. Paul

McCord, E. W.....St. Paul

McDavitt, Thos.....St. Paul

McLaren, Jennette M.....St. Paul

McLoud, C. N.....St. Paul

McKeon, OwenSt. Paul

McNevin, C. F.....St. Paul

MacLaren, A.....St. Paul

Markoe, J. C.....St. Paul

Meade, Charles J.....St. Paul

Meyerding, F. A.....St. Paul

Miller, C. T.....St. Paul

Mitchell, FrederickSt. Paul

Mortensen, N. G.....St. Paul

Moxnihan, T. J.....St. Paul

Nelson, J. C.....St. Paul

Nelson, L. A.....St. Paul

Nippert, H. T.....St. Paul

Norton, H. G.....St. Paul

O'Brien, H. J.....St. Paul

Odendahl, F. H.....St. Paul

Osgen, B. H.....St. Paul

Ohage, Justus.....St. Paul

Ohage, Justus, Jr.....St. Paul

Olander, J. E.....St. Paul

O'Malley, W. P. St. Paul
 Ostergren, E. W. St. Paul
 Perry, C. G. St. Paul
 Peterson, V. N. St. Paul
 Pine, A. A. St. Paul
 Pine, O. S. St. Paul
 Platt, J. J. St. Paul
 Plondke, F. J. St. Paul
 Pool, Daniel St. Paul
 Putnam, Catherine E. St. Paul
 Quinn, J. A. St. Paul
 Ramaley, L. St. Paul
 Ramsey, W. R. St. Paul
 Reynolds, M. H. St. Anthony Park
 Riggs, C. E. St. Paul
 Ritchie, H. P. St. Paul
 Ritchie, Parks St. Paul

Robinson, L. S. B. St. Paul
 Rogers, F. D. St. Paul
 Rogers, J. T. St. Paul
 Rothschild, H. J. St. Paul
 Rothrock, J. L. St. Paul
 Roy, Philomon St. Paul
 Savage, F. J. St. Paul
 Schoch, R. B. J. St. Paul
 Scholdt, F. C. St. Paul
 Schwyzer, Arnold St. Paul
 Senkler, Geo. E. St. Paul
 Shimonek, Anton St. Paul
 Simon, B. F. St. Paul
 Smith, C. E. St. Paul
 Smith, C. E., Jr. St. Paul
 Sneve, Haldor St. Paul
 Sohlberg, O. St. Paul

Stern, Monte South St. Paul
 Sterner, E. G. St. Paul
 Stierle, A., Jr. St. Paul
 Stumm, T. W. St. Paul
 Sweeney, Arthur St. Paul
 Sweeney, C. F. St. Paul
 Taylor, H. L. St. Paul
 Van Slyke, Chas. St. Paul
 Walsh, E. F. St. Paul
 Welch, M. C. St. Paul
 Whitacre, J. C. St. Paul
 Whitcomb, E. H. St. Paul
 White, J. S. St. Paul
 Williams, C. St. Paul
 Winnick, J. B. St. Paul
 Wood, E. S. St. Paul
 Zaun, J. St. Paul

Washington County Medical Society

Regular meetings, second Tuesday in the odd-numbered months

Annual meeting in January

PRESIDENT
 Freligh, E. O'B. Stillwater
SECRETARY
 Humphrey, W. R. Stillwater
 Boleyn, E. S. Stillwater

Burfiend, G. H. Afton
 Clark, T. C. Stillwater
 Furber, W. W. Cottage Grove
 Haines, J. H. Stillwater
 Kalinoff, D. Stillwater
 Landeen, F. G. Stillwater

Merrill, B. J. Stillwater
 Steen, A. H. Cottage Grove
 Stevens, F. A. Lake Elmo
 Wells, E. E. Stillwater
 Withrow, M. E. International Falls

Chisago-Pine County Medical Society

Regular meetings, second Tuesday in January, April, July, and October

Annual meeting in October

PRESIDENT
 Zeien, Thos. North Branch
SECRETARY
 Anderson, C. A. Rush City
 Dredge, H. P. Sandstone

Ehmke, W. C. Willow River
 Froehlich, H. W. Hibbing
 Gray, C. E. Rush City
 Gunz, A. N. Centre City
 Lindberg, A. C. North Branch

McEachern, W. A. Sandstone
 Murdock, H. G. Taylor's Falls
 Tilton, A. J. Harris
 Warner, O. S. Lindstrom
 Wiseman, R. L. Pine City

Central Minnesota District Medical Society

Millie Laas, Isanti, Sherburne, and Kanabec Counties

Regular meetings, second Tuesday in January, April, July, and October

Annual meeting in January

PRESIDENT
 Olsen, S. H. Milaca
SECRETARY
 Parsons, George E. Elk River

Cooney, H. C. Princeton
 Garand, J. H. Dayton
 Nelson, M. S. Mora
 Roadman, Ira M. Onamia
 Shulean, Nellie Cambridge

Sterner, C. W. Cambridge
 Swennes, O. S. Lawrence
 Swenson, Charles Braham
 Vrooman, F. E. St. Francis

St. Louis County Medical Society

St. Louis, Cook, Lake, Itasca, and Carlton Counties

Regular meetings, second Thursday of each month

Annual meeting in December

PRESIDENT
 Coventry, W. A. Duluth
SECRETARY

Schulze, Albert G. Duluth
 Abbott, Wm. P. Duluth
 Adams, B. S. Hibbing
 Anderson, James C. Duluth
 Anderson, L. N. Duluth
 Ayers, G. T. Ely
 Barclay, A. T. Cloquet
 Barney, L. A. Duluth
 Barrett, E. F. Eveleth
 Boyer, S. H. Duluth
 Braden, A. J. Duluth
 Bray, C. W. Biwabik
 Brooks, G. F. Stevenson
 Brunelle, A. M. Cloquet
 Budd, J. D. Two Harbors
 Bullen, F. W. Hibbing
 Caldwell, James P. Coleraine
 Carson, J. H. Duluth
 Carstens, C. F. Keewatin
 Chapman, T. L. Duluth
 Cheney, E. L. Duluth
 Clark, C. H. Duluth
 Clark, F. F. Duluth
 Collins, Homer C. Duluth
 Conkey, C. D. Duluth
 Crowe, J. H. Virginia
 Davis, H. S. Duluth
 Deslauniers, A. A. Duluth
 Drenning, F. C. Duluth
 Ekblad, J. J. Duluth
 Eklund, J. J. Duluth
 Fahay, E. W. Duluth

Fleming, James Cloquet
 Gans, E. M. Dickinson
 Gillespie, N. H. Duluth
 Giroux, A. A. Duluth
 Graham, David Duluth
 Graham, R. Duluth
 Grawn, F. A. Duluth
 Greeley, L. Q. Duluth
 Haney, C. L. Duluth
 Harwood, W. E. Eveleth
 Havens, J. G. W. Cloquet
 Hirschfield, M. S. Duluth
 Hovde, Hans N. Duluth
 Jackola, John Duluth
 Jern, J. H. Duluth
 Johnson, J. V. Eveleth
 Keyes, C. R. Duluth
 Knauff, M. K. Two Harbors
 Kraft, Peter Duluth
 Kuth, J. R. Duluth
 Lenont, C. B. Virginia
 Le Pak, Francis J. Duluth
 Lum, C. E. Duluth
 Lynam, F. Duluth
 McAuliffe, J. Duluth
 McCabe, W. F. Duluth
 McClanahan, J. P. Elv
 McComb, C. F. Duluth
 McCoy, Mary K. Duluth
 McCuen, J. A. Duluth
 McGiffert, E. N. Duluth
 McMahon, Charles
 Copperville, Tenn.
 Magie, W. H. Duluth
 Malmgren, C. V. Virginia
 Moir, Wm. W. Excelsior

More, C. W. Eveleth
 Morss, Clarence R. Coleraine
 Murphy, Ignatius J. Duluth
 Murray, D. D. Duluth
 Nyquist, J. E. Cloquet
 Oredson, O. A. Duluth
 Pare, L. T. Duluth
 Parker, O. W. Ely
 Patton, F. J. Duluth
 Payette, C. H. Duluth
 Pengelly, Edward J. Hibbing
 Robinson, J. M. Duluth
 Rood, D. C. Hibbing
 Rowe, O. W. Duluth
 Schroeder, Charles H. Duluth
 Schwartz, A. H. Duluth
 Seashore, D. E. Duluth
 Shaw, A. W. Buhl
 Shellman, John L. Nashauk
 Smith, B. A. Biwabik
 Stewart, C. A. Duluth
 Sukeforth, L. A. Duluth
 Taylor, A. C. Duluth
 Taylor, C. W. Duluth
 Tufty, J. M. O. Duluth
 Tuohy, E. L. Duluth
 Walker, A. E. Duluth
 Walters, F. R. Moose Lake
 Watkins, O. S. Carlton
 Weston, J. B. Duluth
 Weum, T. W. Duluth
 Wilkinson, Stella Duluth
 Winter, John A. Duluth
 Wunder, H. E. Duluth

FOURTH DISTRICT

COUNCILOR, F. A. KNIGHTS.....Minneapolis

Hennepin County Medical Society

Regular meetings, first Monday in each month, except July and August

Annual meeting in January

PRESIDENT

Quinby, Thos. F.....Minneapolis

SECRETARY

Bradley, C. H.....Minneapolis
 Abbott, A. W.....Minneapolis
 Adair, F. L.....Minneapolis
 Aldrich, A. G.....Minneapolis
 Allen, H. W.....Minneapolis
 Anderson, A. E.....Minneapolis
 Anderson, J. D.....Minneapolis
 Angell, W. A.....Minneapolis
 Arey, H. C.....Excelsior
 Aspelund, S. J.....Minneapolis
 Aune, Martin.....Minneapolis
 Aurand, W. H.....Minneapolis
 Aurness, P. A.....Minneapolis
 Austin, Edward E.....Minneapolis
 Avery, J. Fowler.....Minneapolis
 Aylmer, A. L.....Minneapolis
 Baier, Florence C.....Minneapolis
 Baker, E. L.....Minneapolis
 Bakke, O. H.....Minneapolis
 Baldwin, L. B.....Minneapolis
 Barber, J. P.....Minneapolis
 Barton, G. C.....Minneapolis
 Bass, G. W.....Minneapolis
 Baxter, S. H.....Minneapolis
 Beard, R. O.....Minneapolis
 Beck, J. F.....Minneapolis
 Bell, J. W.....Minneapolis
 Benedict, E. E.....Minneapolis
 Benjamin, A. E.....Minneapolis
 Benson, G. E.....Minneapolis
 Bessenes, A. N.....Minneapolis
 Eishop, C. W.....Minneapolis
 Bissell, Frank S.....Minneapolis
 Blake, James.....Hopkins
 Blegen, H. M.....Minneapolis
 Bloimburgh, A. F.....Minneapolis
 Booth, A. E.....Minneapolis
 Bouman, H. A.....Minneapolis
 Bracken, H. M.....Minneapolis
 Brede, W. G.....Minneapolis
 Brimmer, A. E.....Minneapolis
 Brooks, Charles N.....Minneapolis
 Brown, E. J.....Minneapolis
 Brown, Paul F.....Minneapolis
 Brown, R. S.....Minneapolis
 Bryant, O. R.....Minneapolis
 Byrnes, W. J.....Minneapolis
 Campbell, R. A.....Minneapolis
 Carlaw, C. M.....Minneapolis
 Cary, H. E.....Minneapolis
 Cates, A. B.....Minneapolis
 Chapman, O. S.....Minneapolis
 Chowning, Wm. M.....Minneapolis
 Cirkler, A. A.....Minneapolis
 Cohen, H. A.....Minneapolis
 Collins, Herbert O.....Minneapolis
 Condit, W. H.....Minneapolis
 Cook, Henry W.....Minneapolis
 Cosman, E. O.....Minneapolis
 Cowles, D. C.....Minneapolis
 Crafts, Leo M.....Minneapolis
 Cranmer, Richard C.....Minneapolis
 Crosby, J. A.....Minneapolis
 Cross, G. B.....Robbinsdale, Minn.
 Cross, Jno. G.....Minneapolis
 Crume, Geo. P.....Minneapolis
 Day, L. W.....Minneapolis
 Dearborn, B. S.....Minneapolis
 Deziel, G.....Minneapolis
 Disen, C. F.....Minneapolis
 Donaldson, C. A.....Minneapolis
 Driesbach, N.....Minneapolis
 Dunsmoor, F. A.....Minneapolis
 Dutton, C. E.....Minneapolis
 Egan, John M.....Minneapolis
 Eggen, O. K.....Minneapolis
 Eitel, Geo. G.....Minneapolis
 Erb, Frederick A.....Minneapolis
 Erickson, J. G.....Minneapolis
 Farr, R. E.....Minneapolis
 Fiffeld, Emily W.....Minneapolis
 FitzGerald, Don F.....Minneapolis

Franzen, H. G.....Minneapolis
 Fryberger, W. O.....Minneapolis
 Geist, Emil S.....Minneapolis
 George, J. W.....Minneapolis
 Gilkey, S. E.....Minneapolis
 Gordon, G. J.....Minneapolis
 Gould, J. B.....Minneapolis
 Graham, B. F.....Minneapolis
 Green, E. K.....Minneapolis
 Guilford, H. M.....Minneapolis
 Hagen, G. L.....Minneapolis
 Haggard, G. D.....Minneapolis
 Hall, Pearl M.....Minneapolis
 Hall, W. A.....Minneapolis
 Hollowell, Wm. H.....Minneapolis
 Hamilton, A. S.....Minneapolis
 Hanscome, W. C.....Minneapolis
 Hare, E. R.....Minneapolis
 Harrah, J. W.....Minneapolis
 Harrington, C. D.....Minneapolis
 Hartzell, Thos. B.....Minneapolis
 Haverfield, Addie R.....Minneapolis
 Haynes, F. E.....Minneapolis
 Head, Geo. D.....Minneapolis
 Hedback, A. E.....Minneapolis
 Helk, H. H.....Minneapolis
 Henry, C. E.....Minneapolis
 Higbee, Albert E.....Minneapolis
 Higbee, Paul A.....Minneapolis
 Higgins, J. H.....Minneapolis
 Hill, Eleanor J.....Minneapolis
 Hill, R. J.....Minneapolis
 Hirschfield, Adolph.....Minneapolis
 Hcegh, Knut.....Minneapolis
 Horning, D. W.....Minneapolis
 Huennekens, E. J.....Minneapolis
 Hunter, C. H.....Minneapolis
 Hutchins, E. A.....Minneapolis
 Hyoslef, Jakob.....Minneapolis
 Hynes, James.....Minneapolis
 Hynes, J. E.....Minneapolis
 Irvine, H. G.....Minneapolis
 Irwin, A. F.....Cleveland, Ohio
 Jacobson-Keats, Julia M.....
Harvey, N. D.
 Jensen, M. J.....Minneapolis
 Johnson, A. E.....Minneapolis
 Johnson, H. Amanda.....
San Francisco, Calif.
 Johnson, Julius.....Minneapolis
 Johnson, Nimrod A.....Minneapolis
 Jones, G. M.....Minneapolis
 Jones, Herbert W.....Minneapolis
 Jones, W. A.....Minneapolis
 Kelly, E. S.....Minneapolis
 Kennedy, Jane F.....Minneapolis
 Kerrick, Stanley E.....Minneapolis
 Kimball, H. H.....Minneapolis
 King, E. A.....Minneapolis
 Kistler, C. M.....Minneapolis
 Kistler, J. M.....Minneapolis
 Knight, H. L.....Minneapolis
 Knight, Ray Robert.....Minneapolis
 Knights, F. A.....Minneapolis
 Kohler, Geo. A.....Minneapolis
 Kriedt, Dan'l.....Minneapolis
 Lampson, H. G.....Minneapolis
 Lapierre, C. A.....Minneapolis
 Law, A. A.....Minneapolis
 Leavitt, H. H.....Minneapolis
 Lee, K. J.....Minneapolis
 Lee, Thos. G.....Minneapolis
 Leland, M. N.....Minneapolis
 Lemstrom, Jarl.....Minneapolis
 Lewis, J. D.....Minneapolis
 Lewis, J. M.....Minneapolis
 Lind, A.....Minneapolis
 Lind, C. J.....Minneapolis
 Linton, W. B.....Minneapolis
 Litchfield, J. T.....Minneapolis
 Little, J. W.....Minneapolis
 Litzenberg, J. C.....Minneapolis
 Loberg, A. E.....Minneapolis
 Lockwood, L. S. O.....Minneapolis
 Long, Jesse.....Minneapolis
 Luther, Clara M.....Minneapolis

Lynch, M. J.....Minneapolis
 McCollom, C. A.....Minneapolis
 McDaniel, Oriana.....Minneapolis
 McDermott, T. E.....Minneapolis
 McDonald, H. N.....Minneapolis
 McDonald, I. C.....Minneapolis
 McEachran, A.....Minneapolis
 McLaughlin, J. A.....Minneapolis
 Macdonald, J. W.....Minneapolis
 Macnie, J. S.....Minneapolis
 Maguire, M. F.....Minneapolis
 Maland, C. O.....Minneapolis
 Mann, A. T.....Minneapolis
 Martin, T. R.....Minneapolis
 Maxeiner, Stanley R.....Minneapolis
 May, W. H.....Minneapolis
 Mead, Marion A.....Minneapolis
 Meleck, H. N.....Minneapolis
 Meyer, E. L.....Minneapolis
 Miller, Hugo H.....Minneapolis
 Mintener, J. W.....Minneapolis
 Mitchell, L. C.....Minneapolis
 Moen, J. K.....Minneapolis
 Monahan, J. A.....Minneapolis
 Moore, J. E.....Minneapolis
 Moore, J. T.....Minneapolis
 Moorehead, Martha B.....Minneapolis
 Moren, E.....Minneapolis
 Morris, Minor.....Hopkins, Minn.
 Morse, John H.....Minneapolis
 Morton, H. McI.....Minneapolis
 Mullin, R. H.....Minneapolis
 Murdock, A. J.....Minneapolis
 Murphy, W. B.....Minneapolis
 Murray, Wm. R.....Minneapolis
 Nelson, C. P.....Minneapolis
 Nelson, H. S.....Minneapolis
 Newhart, Horace.....Minneapolis
 Newkirk, H. D.....Minneapolis
 Nicholson, Elmer.....Brainerd
 Nickerson, M. L.....Minneapolis
 Nickerson, W. S.....Minneapolis
 Nippert, L. A.....Minneapolis
 Nissen, Henrik.....Minneapolis
 Nootnagel, C. F.....Minneapolis
 Norred, C. H.....Minneapolis
 Noth, H. W.....Minneapolis
 Nye, W. F.....Minneapolis
 Oberg, C. M.....Minneapolis
 Oberg, Emanuel.....Minneapolis
 O'Brien, R. P.....Minneapolis
 O'Donnell, J. E.....Minneapolis
 Olson, Olaf A.....Minneapolis
 Orton, H. N.....Minneapolis
 Owre, Oscar.....Minneapolis
 Parker, E. H.....Minneapolis
 Parks, Albert H.....Minneapolis
 Pederson, R. M.....Minneapolis
 Peters, R. M.....Minneapolis
 Pettit, C. W.....Minneapolis
 Phelan, R. J.....Minneapolis
 Phillips, Edwin.....Minneapolis
 Pineo, W. B.....Minneapolis
 Plehn, J. F.....Minneapolis
 Pionske, C. J.....Minneapolis
 Poehler, F. T.....Minneapolis
 Pond, Samuel B.....Minneapolis
 Poppe, Fred H.....Minneapolis
 Pratt, C. C.....Minneapolis
 Pratt, F. J.....Minneapolis
 Quist, Henry W.....Minneapolis
 Reed, Chas. A.....Minneapolis
 Rees, S. P.....Minneapolis
 Rexford, L. A.....Minneapolis
 Reynolds, James S.....Minneapolis
 Ringnell, C. J.....Minneapolis
 Rishmiller, J. H.....Minneapolis
 Roan, Carl M.....Minneapolis
 Roberts, Cora B.....Minneapolis
 Roberts, Geo. F.....Minneapolis
 Roberts, Thos. S.....Minneapolis
 Roberts, W. B.....Minneapolis
 Robertson, H. E.....Minneapolis
 Robitshek, E. C.....Minneapolis
 Rochford, W. E.....Minneapolis
 Rodgers, C. L.....Minneapolis

Rome, Robert R.....Minneapolis
 Rosen, SamuelMinneapolis
 Rutledge, J. W.....Minneapolis
 Schefcik, J. F.....Minneapolis
 Schjelderup, N. H.....Minneapolis
 Schlutz, F. W.....Minneapolis
 Schmidt, Geo. F.....Grand Rapids
 Schmidt, Karl H.Minneapolis
 Schwyzer, G.....Minneapolis
 Seashore, Gilbert.....Minneapolis
 Sedgwick, J. P.Minneapolis
 Shelden, W. D.....Minneapolis
 Simpson, J. D.....Minneapolis
 Silvertsen, Ivar.....Minneapolis
 Slocumb, Maude S.....Minneapolis
 Smith, Arthur E.....Minneapolis
 Smith, C. A.....Minneapolis
 Smith, D. Edmund.....Minneapolis
 Smith, Norman M.....Minneapolis
 Soderlind, A.....Minneapolis
 Spratt, C. J.....Minneapolis
 Spratt, C. N.....Minneapolis
 Staples, H. L.....Minneapolis
 Stewart, J. Clark.....Minneapolis
 Stone, J. Leslie.....Minneapolis

Strachauer, Arthur C.....Minneapolis
 Strout, E. S.....Minneapolis
 Stuart, J. H.....Minneapolis
 Sweetser, H. B.....Minneapolis
 Switzer, S. E.Minneapolis
 Taft, J. O.....Minneapolis
 Talbot, Ada E.....Minneapolis
 Tennyson, FalkMinneapolis
 Tennyson, Theodore.....Minneapolis
 Thomas, David O.Minneapolis
 Thomas, G. H.....Minneapolis
 Tibbetts, J. I.....Wayzata
 Todd, F. C.....Minneapolis
 Towers, F. E.....Minneapolis
 Towers, Mary E.....Minneapolis
 Tyrrell, C. C.....Minneapolis
 Ulrich, Henry L.....Minneapolis
 Ulrich, Mabel S.....Minneapolis
 Van Deboget, Lewis.....Minneapolis
 VanderHorck, M. P.....Minneapolis
 Voyer, Emile O.....Minneapolis
 Wang, A. M.....Chicago
 Wanous, E. Z.....Minneapolis
 Warham, Thos. T.....Minneapolis
 Watson, C. W.....Minneapolis

Watson, J. A.....Minneapolis
 Watson, John.....St. Louis Park
 Westbrook, F. F.....Minneapolis
 Weston, C. G.....Minneapolis
 Wethall, A. G.....Minneapolis
 Wheat, F. C.....Minneapolis
 Whetstone, Mary S.....Minneapolis
 Whipple, C. D.....Minneapolis
 White, S. M.....Minneapolis
 Wilcox, Archd E.....Minneapolis
 Wilcox, M. Russell.....Minneapolis
 Wilcox, Van H.....Minneapolis
 Williams, C. W.....Minneapolis
 Williams, H. L.....Minneapolis
 Williams, J. Walter.....Minneapolis
 Williams, Robert.....Minneapolis
 Williams, U. G.....Minneapolis
 Witham, C. A.....Minneapolis
 Wood, Douglas F.....Minneapolis
 Woodard, F. R.....Minneapolis
 Woodworth, Elizabeth.....Minneapolis
 Wright, C. B.....Minneapolis
 Wright, C. D.A.....Minneapolis
 Wright, F. R.....Minneapolis
 Wright, Swan G.....Minneapolis

Meeker County Medical Society

Regular meetings, March, June, September and December *

Annual meeting in June

PRESIDENT
 Danielson, Karl A.....Litchfield
 SECRETARY
 Robertson, J. W.....Litchfield

Brigham, F. T.....Watkins
 Chapman, W. E.....Litchfield
 Cutts, G. A. C.....Grove City
 Donovan, J. J.....Litchfield
 Hildebrandt, Ernest...Forest City

Kauffman, John H.....Dassel
 Peterson, A. C.....Dassel
 Peterson, George E.....Dassel
 Robertson, Archibald W...Litchfield

Wright County Medical Society

Regular meetings, first Monday in January, April, July, and October

Annual meeting in October

PRESIDENT
 Ridgway, A. M.....Annandale
 SECRETARY
 Catlin, John J.Buffalo

Chilton, E. Y.....Howard Lake
 Gelz, J. J.....Buffalo
 Hawkins, E. P.....Montrose
 Hill, A. L.....Monticello
 Kane, J. P.....Delano

Metcalf, J. N.....Monticello
 O'Hair, P.....Waverly
 Roseau, Victor.....Maple Lake
 Shrader, E. E.....Watertown
 Valiquet, M. V.....Rockford

Stearns-Benton County Medical Society

Regular meetings, third Thursday in January, April, July, and October

Annual meeting in April

PRESIDENT
 Boehm, J. C.....St. Cloud
 SECRETARY
 Lamb, Harold L.....Sauk Center
 Anderson, E. A.....Holdingford
 Austin, W. J.....Kimball
 Beaty, J. H.St. Cloud
 Beebe, W. L.St. Cloud
 Brigham, Charles F.....St. Cloud
 Brigham, G. S.....St. Cloud
 DuBois, Julian A.....Sauk Center
 Edmunds, I. L.....St. Cloud

Friesleben, William...Sauk Rapids
 Goehrs, H. W.....Melrose
 Gulde, W. C.....St. Cloud
 Hilbert, Pierre A.....Melrose
 Hubert, R. I.....St. Paul
 Jellison, E. R.....Foley
 Kern, Max J.....St. Cloud
 Kirghis, A. J.....Sauk Center
 Kuhlmann, August.....Melrose
 Lewis, C. B.St. Cloud
 Lewis, Edwin J.....Sauk Center
 McMasters, James M...Sauk Center
 Maloy, Geo. E.....St. Cloud
 Moynihan, A. F.....Sauk Center

Pilon, Pierre C.....Paynesville
 Pinnault, H. A.....St. Joseph
 Putney, George E.....Paynesville
 Rand, M. J.....Sauk Rapids
 Rathbun, A. M.....Rice
 Ridgway, Alex.....Belgrade
 Sherwood, Geo. E.....Kimball
 Sutton, C. S.....St. Cloud
 Watson, Tolbert.....Albany
 Whiting, A. D.....St. Cloud
 Wolner, O. H.....St. Cloud

Kandiyohi-Swift County Medical Society

Regular meetings, on call of the President

Annual meeting in April

PRESIDENT
 Jacobs, J. C.....Willmar
 SECRETARY
 Johnson, HansKerkhoven

Branton, Berton J.....Willmar
 Daignault, Oscar.....Benson
 Frost, H. E.....Willmar
 Healey, J. A.....Spicer
 Johnson, ChristianWillmar
 Laney, R. L.....Holloway

Newman, G. A.....Stillwater
 Peterson, J. R.....Willmar
 Porter, O. M.....Atwater
 Rains, J. M.....Willmar
 Scofield, C. L.....Benson

FIFTH DISTRICT

COUNCILOR, H. M. WORKMAN.....Tracy

Camp Release District Medical Society

Renville, Chippewa, Lac qui Parle, Yellow Medicine, and Sibley Counties

Regular meetings, fourth Thursday in January, April, July, and October

Annual meeting in January

PRESIDENT

Hacking, F. H.....Granite Falls

SECRETARY

Zimbeck, R. D.Montevideo

Aanes, A. M.....Boyd

Adams, R. C.....Bird Island

Bacon, R. S.....Montevideo

Beck, W. M.....Hanley Falls

Benson, O. O.....Sacred Heart

Bergh, L. N.....Montevideo

Burns, F. W.....Milan

Burns, M. A.....Milan

Bushey, M. E.....Arlington

Clay, E. M.....Renville

Cole, H. B.....Franklin

Cressy, F. J.....Granite Falls

Davison, P. C.....Clara City

Duclos, J. A.....Henderson

Duncan, H.Marietta

Ferguson, James B.....Olivia

Flower, Ward Z.....Gibbon

Gammell, H. W.....Madison

Giere, E. O.....Madison

Hauge, M. M.....Clarkfield

Helland, J. W.Maynard

Johnson, A. E.....Madison

Johnson, H. M.....Dawson

Johnson, Otto F.....Winthrop

Jones, D. N.....Gaylord

Kanne, C. W.....Arlington

Lee, William P.....Northfield

Lima, L.Montevideo

Lumley, W. A.....Raymond

Marken, M. H.....Dawson

Mee, P. H.....Gaylord

Mesker, G. H.Olivia

Miller, F. C.....Olivia

Moore, W. J.....Wood Lake

Nelson, N. A.....Clarkfield

Penhall, F. W.....Morton

Powell, C. B.....Madison

Puffer, F. L.....Bird Island

Rogers, C. E.....Montevideo

Schneider, J. P.....Green Isle

Stemsrud, A. A.....Dawson

Stolpestad, H. L.....St. Paul

Strout, G. E.....Winthrop

Walker, G. H.....Fairfax

Brown-Redwood County Medical Society

Regular meetings, January, May, and October

Annual meeting, second Tuesday in January

PRESIDENT

Gray, F. D.....Marshall

SECRETARY

Brand, W. A.Redwood Falls

Adams, J. L.Morgan

Aldrich, F. H.Belview

Clement, L. O.....Lamberton

Fritsche, L. A.....New Ulm

Gosslee, G. L.....Minnesota Lake

Kiefer, M. A.....Sleepy Eye

Kuske, A. L.....Sanborn

Prim, J. A.....Comfrey

Reineke, G. F.....New Ulm

Rothenberg, J. C.....Springfield

Schoch, J. L.....New Ulm

Shrader, J. S.....Springfield

Strickler, O. C.....New Ulm

Weiser, G. B.....New Ulm

Wellcome, J. W. B.....Sleepy Eye

Lyon-Lincoln County Medical Society

Regular meetings, third Tuesday in February, May, August, and November

Annual meeting in February

PRESIDENT

Thordarson, Th.....Minneota

SECRETARY

Workman, H. M.Tracy

Akester, WardMarshall

Bacon, C. G.....Marshall

Cox, A. J.....Tyler

Germo, Chas.....Balaton

Hard, A. D.....Marshall

Hoidale, A. D.Tracy

Jacquot, G. L.....Ivanhoe

Jensen, J. C.Hendricks

Kinney, R. H.....Lake Benton

Persons, C. E.....Marshall

Robertson, J. B.....Cottonwood

St. Dennis, E. F.....Ghent

Sanderson, Ed. T.....Minneota

Tharaldson, Tornline ..Cottonwood

Vadheim, Alfred L.....Tyler

Valentine, W. H.....Tracy

Wakefield, Wm.....Lake Benton

SIXTH DISTRICT

COUNCILOR, A. E. SPALDING.....Luverne

Southwestern Medical Society

Pipestone, Rock, Nobles, Murray, and Cottonwood Counties

Regular meetings, second Thursday in January and July

Annual meeting in January

PRESIDENT

Williams, A. B.....Wilmont

SECRETARY

King, EmilFulda

Balcom, G. G.....Lake Wilson

Rong, J. H.....Jasper

Brown, A. H.....Pipestone

Dolan, C. P.....Worthington

Dudley, J. H.....Windom

Gerber, Lou M.....Jasper

Hart, B. D.....Round Lake

Humiston, Ray.....Worthington

Leebens, John H.....Lismore

Lowe, Thomas.....Pipestone

McKeon, E. G.....Edgerton

Manson, F. M.....Worthington

May, C. C.....Adrian

Miller, Victor J.....Westbrook

Mork, B. O.....Worthington

Paulson, T. S.....Hills

Rice, G. D.....Pipestone

Richardson, W. E.....Heron Lake

Senn, Edward W.....Slayton

Sherman, C. L.....Luverne

Smallwood, Justin ..Worthington

Sogge, L.Windom

Spalding, A. E.....Luverne

Sullivan, M.Adrian

Taylor, Wm. J.....Pipestone

Weiser, F. R.....Windom

Whvte, P. D.....Hardwick

Wiedow, HenryWorthington

Williams, Leon A.....Slayton

Wright, C. O.....Luverne

Blue Earth Valley Medical Society

Faribault and Martin Counties

Regular meetings, second Thursday in January and July

Annual meeting in January

PRESIDENT
Burton, C. N.Elmore
SECRETARY

Broberg, J. A.Blue Earth
Buser, J. R.Delavan
Chambers, W. C.Blue Earth

Dewey, G. W.Fairmont
Durgin, F. L.Winnebago
Franklin, A. J.Blue Earth
Gullixson, A.Briceyn
Hunt, F. N.Blue Earth
Hunt, R. C.Blue Earth
Hunte, A. F.Truman

Jacobs, A. C.Elmore
Johnson, H. P.Fairmont
Luedtke, G. H.Fairmont
McGroarty, J. J.Easton
Mikkelsen, M.Wells
Rebman, E. C.Truman
Richardson, W. J.Fairmont

Jackson County Medical Society

Regular meetings, second Tuesday in May and November

Annual meeting in November

PRESIDENT
Artz, Herbert L.Jackson
SECRETARY
Benson, Iver S.Jackson

Allen, Cora S.Heron Lake
Allen, R. W.Heron Lake
Leigh, H. L.Lakefield
Maitland, David P.Jackson
Moe, Anton J.Heron Lake

Portman, William C.Jackson
Richmond, C. D.Windom
Searles, ScottLakefield

Watonwan County Medical Society

Regular meetings, February, April, October, and December

Annual meeting, second Wednesday in December

PRESIDENT
McCarthy, W. J.Madelia
SECRETARY
Haynes, B. H.St. James

Cooley, C. O.Madelia
Rowe, W. H.St. James

Thompson, AlbertSt. James

SEVENTH DISTRICT

COUNCILOR, F. A. DODGE.....Le Sueur

Nicollet-Le Sueur County Medical Society

Regular meetings, January and September

Annual meeting in January

PRESIDENT
Valin, H. D.St. Peter
SECRETARY
Le Clerc, Joseph E.Le Sueur
Aitkens, H. B.Le Sueur Center
Baskett, Olive T.SanAngelo, Tex

Daniels, J. W.St. Peter
Dodge, F. A.Le Sueur
Freeman, George H.St. Peter
Hartung, H. A.Le Sueur
McDougald, D. W.Le Sueur
McIntyre, G. W.St. Peter

Merritt, G. F.St. Peter
Olson, R. G.Nicollet
Strathern, F. P.St. Peter
Theissen, W. N.Henderson
Tomlinson, H. A.St. Peter
Woodworth, L. F.Le Sueur Center

McLeod County Medical Society

Regular meetings, January, April, July, and October

Annual meeting in January

PRESIDENT
Axilrod, D. L.Hutchinson
SECRETARY
Maurer, E. L.Brownton

Bolles, D. W.Minneapolis
Clement, J. E.Lester Prairie
Dulude, S.Winsted
Hovorka, T. W.Glencoe
Nickerson, B. S.Glencoe

Sheppard, Fred.Hutchinson
Sheppard, P. E.Hutchinson
Tinker, C. W.Stewart
Trutna, T. J.Silver Lake
Wakefield, KeeHutchinson

Scott-Carver County Medical Society

Regular meetings, first Thursday in March, June, September, and December

Annual meeting in December

PRESIDENT
McKeon, JamesMontgomery
SECRETARY
Reiter, H. W.Shakopee
Fischer, P. M.Shakopee

Grivelly, H. J.Hohenwald, Tenn.
Henricksen, H. G.New Market
Landenberger, John.New Prague
Maertz, Wm. F.New Prague
Moloney, G. R.Belle Plaine
Novak, Edward E.New Prague

Schneider, H. A.Jordan
Shelver, H. J.Shakopee
Soper, J. E.Norwood
Von Bohland, F. J.Belle Plaine

Goodhue County Medical Society

Regular meetings, first Tuesday in January, April, July, and October

Annual meeting in January

PRESIDENT
Jones, A. W.Red Wing
SECRETARY
Smith, M. W.Red Wing
Anderson, J. V.Red Wing
Backe, H. E.Kenyon

Conley, A. T.Cannon Falls
Conley, H. E.Cannon Falls
Cremer, M. H.Red Wing
Cremer, P. H.Cannon Falls
Dimmitt, F. W.Red Wing
Gates, C. E.Goodhue
Gates, J. A.Kenyon
Haessly, S. B.Red Wing

Hill, Charles.Pine Island
Larson, O. O.Zumbrota
McKinstry, H. L.Red Wing
Overholt, G. H.Kenyon
Sawyer, H. P.Goodhue
Wellner, G. C.Red Wing
Werner, N. L.Red Wing

Rice County Medical Society

Regular meetings, first Wednesday in January, April, July, and October

Annual meeting in January

PRESIDENT
Rogers, A. C. Faribault

SECRETARY
Davis, F. U. Faribault
Hunt, W. A. Northfield
Huxley, F. R. Faribault
Lexa, F. J. Lonsdale

McBroom, D. E. Northfield
Macdonald, A. Morristown
Mayland, M. L. Faribault
Phillips, J. G. Northfield
Phillips, J. R. Northfield
Pringle, A. F. Northfield
Robilliard, W. H. Faribault
Rose, F. M. Faribault
Rumpf, W. H. Faribault

Seeley, I. F. Northfield
Seeley, J. S. Faribault
Smith, P. A. Faribault
Strang, D. M. Northfield
Tanner, A. C. Faribault
Warren, F. S. Faribault
White, J. B. Montgomery
Wilson, W. Northfield

Wabasha County Medical Society

Regular meeting (annually) first Thursday after first Monday in July

PRESIDENT
French, E. A. Plainview

SECRETARY
Wilson, W. F. Lake City

Adams, W. T. Elgin
Bayley, E. H. Lake City
Cochrane, W. J. Lake City
Dempsev, D. P. Kellogg
Fleischhauser, D. S. Adrian

Heagerty, W. B. Mazappa
Ingram, L. C. Zumbro Falls
Nauth, W. W. Minneiska
Shaughnessy, M. J. Wabasha
Slocumb, J. A. Plainview

EIGHTH DISTRICT

COUNCILOR, A. O. BJELLAND. Mankato

Blue Earth County Medical Society

Regular meetings last Monday of each month

Annual meeting, December meeting

PRESIDENT
Liedloff, A. G. Mankato

SECRETARY
Kelly, T. C. Mankato
Allen, Frank A. Elysian
Andrews, J. W. Mankato
Andrews, Roy N. Mankato
Benham, E. W. Mankato
Bigelow, Charles E. Madison Lake
Bjelland, A. O. Mankato

Bomberger, F. J. Mapleton
Curran, G. R. Mankato
Dahl, G. A. Mankato
Davis, E. J. Minnehaha
Field, Merton Canby
Grimes, H. B. Madelia
Hering, H. H. Lake Crystal
Holbrook, J. S. Mankato
Holman, C. J. Mankato
Hughes, Jane C. Mankato
James, J. H. Mankato
Kemp, A. F. Mankato

Krueger, L. W. Mapleton
McMicheal, O. H. Vernon Center
Macbeth, J. L. St. Clair
Merrill, J. E. Amboy
Osborn, Lida. Mankato
Rosenwald, J. D. Mankato
Schlesselman, J. T. Good Thunder
Schmitt, A. F. Mankato
Schmitt, S. C. Mankato
Solmer, A. E. Mankato
Williams, John. Lake Crystal

Dodge County Medical Society

Regular meetings, third Wednesday in January, May, and September

Annual meeting in May

PRESIDENT
Thimsen, N. C. Hayfield

SECRETARY
Davis, F. W. Kasson

Adams, R. T. Mantorville
Baker, A. L. Kasson
Belt, W. E. Dodge Center
Bigelow, C. S. Dodge Center

Clifford, F. F. West Concord
Harrison, E. E. West Concord
Way, O. F. Clairmont

Freeborn County Medical Society

Regular meetings, fourth Tuesday in May and November

Annual meeting in May

PRESIDENT
Von Berg, J. P. Albert Lea

SECRETARY
Rodli, O. E. Albert Lea
Bessesen, W. A. Albert Lea

Burton, Oscar A. Sarasota, Florida
Calhoun, Frank W. Albert Lea
Christiansen, James Alden
Freeman, J. P. Glenville
Garlock, A. V. Hartland
Gordon, David. Albert Lea
Gramenz, F. Albert Lea

Hood, Mary E. Albert Lea
Kamp, Byron A. Alden
Nannestad, J. R. Albert Lea
Palmer, W. L. Albert Lea
Stevenson, Robert G. Albert Lea
Todd, W. E. Albert Lea
Wedge, A. C. Albert Lea

Houston-Fillmore County Medical Society

Regular meetings, May and October; one midsummer meeting

Annual meeting, first Thursday in May

PRESIDENT
Dunn, J. T. Wykoff

SECRETARY
Fischer, O. F. Houston
Anderson, Norman E. Harmony
Browning, W. E. Caledonia
Drake, F. A. Lanesboro

Eby, Cyrus B. Spring Valley
Gowdy, F. A. Harmony
Hart, A. B. Pequot
Helland, G. M. Spring Grove
Hvoslef, J. C. Lanesboro
Jensen, T. Spring Grove
Love, George A. Preston
Nass, H. A. Mabel

Onsgard, C. K. Rushford
Onsgard, L. K. Houston
Reay, G. R. Hokah
Rhines, D. C. Caledonia
Stocking, Fred F. Rushford
Utley, J. D. Spring Valley
Woodruff, C. W. Chatfield

Mower County Medical Society

Regular meetings, second Wednesday in January, April, July, and October

Annual meeting in October

PRESIDENT
 Lewis, C. F. Austin
SECRETARY
 Leck, Clifford C. Austin
 Allen, A. W. Austin
 Cobb, W. F. Lyle
 Collins, A. N. Austin

Frazer, W. A. Lyle
 Gray, G. W. Brownsdale
 Hart, M. J. LeRoy
 Hegge, C. A. Austin
 Hegge, O. H. Austin
 Henslin, A. E. LeRoy
 Johnson, C. H. Austin

Mitchell, R. S. Grand Meadow
 Peirson, Homer F. Austin
 Rogers, G. M. F. Austin
 Schottler, G. J. Dexter
 Smith, E. V. Adams
 Torkelson, P. T. Lyle

Olmsted County Medical Society

Regular meetings, second Friday in each alternating month

Annual meeting in January

PRESIDENT
 Wilson, L. B. Rochester
SECRETARY
 Crewe, John E. Rochester
 Adams, A. S. Rochester
 Balfour, Donald Rochester
 Beckman, E. H. Rochester
 Braasch, W. F. Rochester
 Dugan, R. C. Eyota

Fawcett, Charles E. Stewartville
 Giffin, H. Z. Rochester
 Graham, C. Rochester
 Granger, Gertrude B. Rochester
 Henderson, M. S. Rochester
 Joyce, George T. Rochester
 Judd, E. S. Rochester
 MacCarty, W. C. Rochester
 Matthews, Justus Rochester
 Maury, J. W. Draper. Rochester
 Mayo, C. H. Rochester

Mayo, W. J. Rochester
 Phelps, R. M. Rochester
 Plummer, H. S. Rochester
 Russell, H. R. Stewartville
 Smith, F. L. Chatfield
 Smith, Thaddeus D. Rochester
 Stacy, Leda Rochester
 Stinchfield, A. W. Rochester
 Witherstine, H. H. Rochester

Steele County Medical Society

Regular meetings, first Tuesday in each month

Annual meeting in January

PRESIDENT
 Andrist, J. W. Owatonna
SECRETARY
 Stewart, Allan B. Owatonna

Adair, John H. Owatonna
 Ertel, E. Q. Ellendale
 Eustis, W. C. Owatonna
 Hatch, Theo. L. Owatonna
 Melby, Benedick. Blooming Prairie

Morehouse, G. G. Owatonna
 Schulze, George. Owatonna
 Smersh, Francis M. Owatonna
 Warren, J. W. Blooming Prairie

Waseca County Medical Society

Regular meetings, first Monday in January, April, July, and October

Annual meeting in January

PRESIDENT
 Rudolf, A. J. Waseca
SECRETARY
 Blanchard, H. G. Waseca

Batchelder, E. J. New Richland
 Chamberlin, W. A. Waseca
 Cory, Wm. M. Waterville
 Fugeino, G. R. Janesville
 Hagen, H. O. New Richland

Lynn, J. F. Waseca
 O'Hara, J. J. Janesville
 Meilicke, W. A. Janesville
 Shrodes, George H. Waterville
 Swartwood, F. A. Waseca

Winona County Medical Society

Regular meetings, first Monday in January, April, July, and October

Annual meeting in January

PRESIDENT
 McLaughlin, E. M. Winona
SECRETARY
 McGaughey, H. F. Winona
 Clark, C. N. St. Charles
 Dolder, F. C. St. Charles
 Gates, G. L. Winona

Heise, W. F. C. Winona
 Keyes, E. D. Winona
 Leicht, Oswald Winona
 Lichtenstein, H. M. Winona
 Lindsay, W. V. Winona
 Lynch, J. L. Winona
 Muir, Edwin S. Winona
 Munger, L. H. Winona

Neumann, W. H. Lewiston
 Pritchard, D. B. Winona
 Robbins, C. P. Winona
 Rollins, F. H. St. Charles
 Scott, J. W. St. Charles
 Steinbach, John Winona
 Stewart, D. A. Winona
 Tweedy, G. J. Winona

ALPHABETICAL ROSTER

Aanes, A. M. Boyd
 Aborn, Wm. H. Brainerd
 Abbott, E. J. St. Paul
 Abbott, Wm. P. Duluth
 Adair, F. L. Minneapolis
 Adams, A. S. Rochester
 Adams, J. L. Morgan
 Adams, R. C. Bird Island
 Adams, R. T. Mantorville
 Adams, W. T. Elgin
 Adkins, C. M. Ogema
 Aitkens, H. B. Le Sueur Center
 Akester, Ward Marshall
 Aldrich, A. G. Minneapolis
 Aldrich, F. H. Belview
 Alexander, F. H. Barnesville
 Allen, A. W. Austin
 Allen, Cora S. Heron Lake
 Allen, Frank A. Elysian
 Allen, H. W. Minneapolis
 Allen, Mason St. Paul
 Allen, R. W. Heron Lake
 Ancker, A. B. St. Paul
 Anderson, A. E. Minneapolis
 Anderson, C. A. Rush City
 Anderson, Ernest A. Holdingford
 Anderson, James C. Duluth
 Anderson, J. D. Minneapolis
 Anderson, J. V. Red Wing
 Anderson, L. N. Duluth
 Anderson, Norman E. Harmony
 Anderson, W. S. Warren
 Andrews, J. W. Mankato
 Angell, W. A. Minneapolis
 Arey, H. C. Excelsior
 Armstrong, J. M. St. Paul
 Armstrong, L. W. Breckenridge
 Arneson, Thomas Kennedy
 Artz, Herbert L. Jackson
 Aspelund, S. J. Minneapolis
 Aune, Martin Minneapolis
 Aund, W. H. Minneapolis
 Aurness, P. A. Minneapolis
 Austin, Edward E. Minneapolis
 Austin, W. J. Kimball
 Avery, J. Fowler Minneapolis
 Awty, W. J. Moorhead
 Axilrod, D. C. Hutchinson
 Ayers, G. T. Ely
 Aylmer, A. L. Minneapolis

Bacon, C. G. Marshall
 Backe, H. E. Kenyon
 Bacon, Knox St. Paul
 Bacon, L. C. St. Paul
 Bacon, R. S. Montevideo
 Baier, Florence C. Minneapolis
 Baker, A. C. Fergus Falls
 Baker, A. L. Kasson
 Baker, E. L. Minneapolis
 Bakke, O. H. Minneapolis
 Balcome, F. E. St. Paul
 Balcom, G. G. Lake Wilson
 Baldwin, L. B. Minneapolis
 Balfour, Donald Rochester
 Ball, C. R. St. Paul
 Barber, J. P. Minneapolis
 Barclay, A. Cloquet
 Barney, L. A. Duluth
 Barrett, E. F. Eveleth
 Barringer, Paul E. St. Paul
 Barsness, Nellie St. Paul
 Barton, E. R. Frazee
 Barton, G. C. Minneapolis
 Baskett, Olive T. San Angelo, Tex.
 Bass, G. W. Minneapolis
 Batcherell, Oliver T. Brainerd
 Raxter, S. H. Minneapolis
 Rayley, E. H. Lake City
 Readie, W. B. St. Paul
 Beard, R. O. Minneapolis
 Beaty, J. H. St. Cloud
 Beaudoux, H. A. St. Paul
 Beck, J. F. Minneapolis
 Beck, W. M. Hanley Falls
 Beckley, F. L. St. Paul
 Beckman, E. H. Rochester
 Beebe, Warren L. St. Cloud
 Beise, R. A. Brainerd
 Bell, J. W. Minneapolis
 Belt, W. E. Dodge Center
 Benedict, E. E. Minneapolis
 Benepe, L. M. St. Paul
 Benham, E. W. Mankato

Benjamin, A. E. Minneapolis
 Bennion, P. H. St. Paul
 Benson, G. E. Minneapolis
 Benson, O. O. Sacred Heart
 Bergh, L. N. Montevideo
 Bertelson, O. L. Crookston
 Berthold, J. L. Perham
 Bessessen, A. N. Minneapolis
 Bessessen, W. A. Albert Lea
 Bettingen, J. W. St. Paul
 Bigelow, Charles E. Madison Lake
 Bigelow, C. S. Dodge Center
 Bishop, C. W. Minneapolis
 Bissell, Frank S. Minneapolis
 Bjelland, A. O. Mankato
 Blake, James Hopkins
 Blegen, H. M. Minneapolis
 Blomburgh, A. F. Minneapolis
 Bloom, C. J. Mora
 Bock, R. A. St. Paul
 Boeckmann, Edouard St. Paul
 Boeckmann, Egil St. Paul
 Boehm, J. C. St. Cloud
 Bohland, E. H. St. Paul
 Boleyn, E. S. Stillwater
 Bolles, D. W. Minneapolis
 Bolsta, Chas. Ortonville
 Bomberger, F. J. Mapleton
 Booth, A. E. Minneapolis
 Bouman, H. A. Minneapolis
 Boxell, C. E. St. Paul
 Boyer, S. H. Duluth
 Braasch, W. F. Rochester
 Bracken, H. M. Minneapolis
 Braden, A. J. Duluth
 Bradley, C. H. Minneapolis
 Brand, W. A. Redwood Falls
 Branton, Berton J. Willmar
 Bratrud, Theodore Warren
 Bray, C. W. Biwabik
 Bray, E. R. St. Paul
 Brede, W. G. Minneapolis
 Briggs, F. W. Hendrum
 Brigham, Charles F. St. Cloud
 Brigham, F. T. Watkins
 Brigham, G. S. St. Cloud
 Brimmer, A. E. Minneapolis
 Bristol, L. D. St. Paul
 Broberg, J. A. Blue Earth
 Brooks, Charles N. Minneapolis
 Brooks, D. F. St. Paul
 Brooks, G. F. Stevenson
 Brown, A. H. Pipestone
 Brown, E. I. St. Paul
 Brown, E. J. Minneapolis
 Brown, Paul F. Minneapolis
 Brown, R. S. Minneapolis
 Brown, S. E. St. Paul
 Browning, W. E. Caledonia
 Brunelle, A. M. Cloquet
 Bryant, O. R. Minneapolis
 Buckley, E. W. St. Paul
 Budd, J. D. Two Harbors
 Bullen, F. W. Hibbing
 Burch, F. E. St. Paul
 Burfiend, G. H. Afton
 Burnap, W. L. Pelican Rapids
 Burns, F. W. Watson
 Burns, M. A. Milan
 Burton, C. N. Elmore
 Burton, Oscar A. Sarasota, Florida
 Buser, J. R. Delavan
 Bushey, M. E. Arlington
 Byrnes, W. J. Minneapolis

Caine, C. E. Morris
 Caldwell, D. K. St. Paul
 Caldwell, James P. Coleraine
 Calhoun, Frank W. Albert Lea
 Cameron, J. A. St. Paul
 Campbell, E. P. St. Paul
 Campbell, J. E. St. Paul
 Cannon, Harry St. Paul
 Carlaw, C. M. Minneapolis
 Carman, Chas. L. St. Paul
 Carman, J. B. Detroit
 Carman, J. H. Detroit
 Carsten, C. F. Keewatin
 Cary, H. E. Minneapolis
 Cates, A. B. Minneapolis
 Catlin, John J. Buffalo
 Catun, T. J. Palisade

Cavanaugh, J. O. St. Paul
 Chamberlin, J. W. St. Paul
 Chamberlin, W. A. Waseca
 Chambers, W. A. Blue Earth
 Chapman, O. S. Minneapolis
 Chapman, T. L. Duluth
 Chapman, W. E. Litchfield
 Charpentier, A. A. St. Paul
 Cheney, E. L. Duluth
 Chilton, E. Y. Howard Lake
 Chowning, Wm. M. Minneapolis
 Christenson, C. R. Starbuck
 Christiansen, James Alden
 Christie, George R. Long Prairie
 Christison, J. T. St. Paul
 Cirkler, A. A. Minneapolis
 Clark, C. H. Duluth
 Clark, F. F. Duluth
 Clark, T. C. Stillwater
 Clay, E. M. Renville
 Clement, J. B. Lester Prairie
 Clement, L. O. Lamberton
 Clifford, F. F. West Concord
 Cobb, W. F. Lyle
 Cochran, W. J. Lake City
 Cohen, H. A. Minneapolis
 Cole, Herman B. Franklin
 Coleman, Fred B. Carlos
 Collins, A. N. Austin
 Collins, H. Duluth
 Collins, Herbert O. Minneapolis
 Colvin, A. R. St. Paul
 Comstock, A. E. St. Paul
 Condit, W. H. Minneapolis
 Conkey, C. D. Duluth
 Conley, A. T. Cannon Falls
 Conley, H. E. Cannon Falls
 Cook, Henry W. Minneapolis
 Cook, Paul B. St. Paul
 Cooley, C. O. Madelia
 Coon, Geo. M. St. Paul
 Cooney, H. C. Princeton
 Cooper, D. J. Dent
 Corrigan, J. E. Spooner
 Cosman, E. O. Minneapolis
 Coulter, Chas. F. Wadena
 Courtney, Walter Brainerd
 Coventry, W. A. Duluth
 Cowles, D. C. Minneapolis
 Cox, A. J. Tyler
 Crafts, Leo M. Minneapolis
 Cranmer, Richard C. Minneapolis
 Cremer, M. H. Red Wing
 Cremer, P. H. Cannon Falls
 Cressy, F. J. Granite Falls
 Crewe, John E. Rochester
 Crosby, J. A. Minneapolis
 Cross, G. B. Robbinsdale, Minn.
 Cross, Jno. G. Minneapolis
 Crowe, J. H. Virginia
 Crume, Geo. P. Minneapolis
 Cuff, W. S. St. Paul
 Cummings, D. S. Waseca
 Curran, G. R. Mankato
 Cutts, G. A. C. Grove City

Dahl, G. A. Mankato
 Daignault, Oscar Benson
 Dampier, C. E. Crookston
 Daniels, J. W. St. Peter
 Danielson, Karl A. Litchfield
 Darling, J. B. St. Paul
 Darrow, Daniel C. Moorhead
 Daugherty, L. E. St. Paul
 Davis, E. J. Minnehaha
 Davis, H. S. Duluth
 Davis, F. U. Faribault
 Davis, F. W. Kasson
 Davis, H. W. St. Paul
 Davis, L. A. Dalton
 Davis, William St. Paul
 Davison, P. C. Clara City
 Dav, L. W. Minneapolis
 Dearborn, B. S. Minneapolis
 Dempsey, D. P. Kellogg
 Dennis, W. A. Minneapolis
 Denny, C. F. St. Paul
 Deslauriers, A. A. Duluth
 Desmond, M. A. Akeley
 Detling, F. E. Duluth
 Dewey, G. W. Fairmont
 Deziel, G. Minneapolis
 Dimmitt, F. W. Red Wing
 Dinwoodie, W. St. Paul

Disen, C. F. Minneapolis
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 Dodge Franklin A. Le Sueur
 Dodge, W. M. Farmington, Minn.
 Dohm, A. J. St. Paul
 Dolan, C. P. Worthington
 Dolder, F. C. St. Charles
 Donaldson, C. A. Minneapolis
 Donovan, J. J. Litchfield
 Drake, F. A. Lanesboro
 Drenning, F. C. Duluth
 Driesbach, N. Minneapolis
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 Duclos, J. A. Henderson
 Dudley, J. H. Windom
 Dulude, S. Winsted
 Duncan, H. Marietta
 Dunlop, A. H. Crookston
 Dunn, J. T. Wykoff
 Dunning, A. W. St. Paul
 Dunsmoor, F. A. Minneapolis
 Dursin, F. L. Winnebago
 Dutton, C. E. Minneapolis

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 Earl, R. O. St. Paul
 Eberlin, E. A. Glenwood
 Eby, Cyrus B. Spring Valley
 Edmunds, I. L. St. Cloud
 Egan, John M. Minneapolis
 Eggen, O. K. Minneapolis
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 Eitel, Geo. G. Minneapolis
 Ekblad, J. W. Duluth
 Eklund, J. R. Duluth
 Elsey, J. R. Glenwood
 Erb, Frederick A. Minneapolis
 Ericson, J. G. Minneapolis
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 Esser, John Perham
 Estrem, C. O. Detroit
 Ewing, C. F. Wheaton

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 Ferguson, J. C. St. Paul
 Ferguson, James B. Olivia
 Field, Merton Canby
 Fifield, Emily W. Minneapolis
 Fischer, O. F. Houston
 Fischer, P. M. Shakopee
 FitzGerald, Don F. Minneapolis
 Fleischhauer, D. S. Wabasha
 Fleming, A. S. Wheaton
 Fleming, James Cloquet
 Flower, Ward Z. Gibbon
 Fortier, E. L. Little Falls
 Foster, Burnside St. Paul
 Francis, S. O. White Bear
 Franklin, A. J. Blue Earth
 Franzen, H. G. Minneapolis
 Frazer, W. A. Lyle
 Freeborn, J. A. Fergus Falls
 Freeman, Charles St. Paul
 Freeman, George H. St. Peter
 Freeman, J. P. Glenville
 Freleigh, E. O. B. Stillwater
 French, E. A. Plainview
 Friesleben, William Sauk Rapids
 Fritschie, L. A. New Ulm
 Froehlich, H. W. Hibbing
 Frost, H. E. Willmar
 Fryberger, W. O. Minneapolis
 Fugelino, G. R. Janesville
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 Fulton, J. F. St. Paul
 Furber, W. W. Cottage Grove

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 Gammell, H. W. Madison
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 Gates, C. E. Goodhue
 Gates, J. A. Kenyon
 Garand, J. H. Dayton
 Garlock, A. V. Hartland
 Geist, Emil S. Minneapolis
 Gelz, J. J. Buffalo
 George, James W. Minneapolis
 George, J. W. Minneapolis
 Gerber, Lou M. Jasper
 Germon, Chas. Balaton
 Ghent, M. M. St. Paul
 Gibbon, L. L. Lowry
 Giere, E. O. Madison
 Giffillan, J. S. St. Paul
 Giffin, H. Z. Rochester

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 Gillette, A. J. St. Paul
 Gillespie, N. H. Duluth
 Gilmore, R. T. Bemidji
 Giroux, A. A. Duluth
 Goehrs, H. W. Melrose
 Goltz, E. V. St. Paul
 Goodrich, Judd St. Paul
 Gordon, David Albert Lea
 Gordon, G. J. Minneapolis
 Gosslee, A. F. Deer Creek
 Gosslee, G. L. Minnesota Lake
 Gould, J. B. Minneapolis
 Gowdy, F. A. Harmony
 Graham, B. F. Minneapolis
 Graham, C. Rochester
 Graham, David Duluth
 Graham, R. Duluth
 Gramenz, F. Albert Lea
 Granger, Gertrude B. Rochester
 Gravelle, J. M. A. St. Paul
 Graves, Carlton Altin
 Grawn, Frank A. Duluth
 Grawn, F. A. Duluth
 Gray, C. E. Rush City
 Gray, F. D. Marshall
 Gray, G. W. Brownsdale
 Greeley, L. Q. Duluth
 Green, E. K. Minneapolis
 Grimes, H. B. Madelia
 Grivelly, H. J. Hohenwald, Tenn.
 Groves, A. F. Brainerd
 Guilford, H. M. Minneapolis
 Gulde, W. C. St. Cloud
 Gullickson, A. Briceville
 Gunz, A. N. Centre City

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 Haessly, S. B. Red Wing
 Hagen, G. L. Minneapolis
 Hagen, Ole J. Moorhead
 Haggard, G. D. Minneapolis
 Haines, J. H. Stillwater
 Hall, A. R. St. Paul
 Hall, Elmer E. Little Falls
 Hall, Pearl M. Minneapolis
 Hall, W. A. Minneapolis
 Hallenbeck, D. F. St. Paul
 Hallowell, Wm. H. Minneapolis
 Hamel, C. E. McIntosh
 Hamilton, A. S. Minneapolis
 Hammes, E. St. Paul
 Hammond, J. F. St. Paul
 Hand, W. R. Wendell
 Haney, C. L. Duluth
 Hanscome, W. C. Minneapolis
 Hansen, Marius Hendrum
 Hare, E. R. Minneapolis
 Hard, A. D. Marshall
 Harding, J. C. St. Paul
 Harrah, J. W. Minneapolis
 Harrington, C. D. Minneapolis
 Harrison, E. E. West Concord
 Hart, A. B. Canton
 Hart, B. D. Round Lake
 Hart, M. J. LeRoy
 Hartung, H. A. Le Sueur
 Hartzell, Thos. B. Minneapolis
 Harwood, W. E. Eveleth
 Haskell, A. D. Alexandria
 Haugen, G. T. Battle Lake
 Hauge, M. M. Clarkfield
 Haugan, O. M. Fergus Falls
 Havens, J. G. W. Cloquet
 Haverfield, Addie R. Minneapolis
 Hawkins, E. P. Montrose
 Hawkins, V. J. St. Paul
 Haynes, B. H. St. James
 Haynes, F. E. Minneapolis
 Head, Geo. D. Minneapolis
 Heagerty, W. B. Mazappa
 Healey, J. A. Spicer
 Heath, A. C. St. Paul
 Hedback, A. E. Minneapolis
 Hegge, C. A. Austin
 Hegge, O. H. Austin
 Helmark, J. H. Gary
 Heise, W. F. C. Winona
 Helk, H. H. Minneapolis
 Helland, G. M. Spring Grove
 Helland, J. W. Maynard
 Hemstead, Bert E. Brainerd
 Hemstead, W. Brainerd
 Henderson, M. S. Rochester
 Henderson, A. Powell River, B. C.
 Hendricksen, H. G. New Market
 Hendrickson, J. F. Fertile

Henry, C. E. Minneapolis
 Hensel, Charles N. St. Paul
 Henslin, A. E. LeRoy
 Hering, H. H. Lake Crystal
 Hesselgrave, S. S. St. Paul
 Higbee, Albert E. Minneapolis
 Higbee, Paul A. Minneapolis
 Higgins, J. H. Minneapolis
 Hilbert, Pierre A. Melrose
 Hildebrandt, Ernest Forest City
 Hilger, D. D. St. Paul
 Hill, A. L. Monticello
 Hill, Charles. Pine Island
 Hill, Eleanor J. Minneapolis
 Hill, R. J. Minneapolis
 Hirschfield, Adolph. Minneapolis
 Hirschfield, M. S. Duluth
 Hodgson, H. H. Crookston
 Hoegh, Knut Minneapolis
 Hoff, Peder A. St. Paul
 Hoidale, A. D. Tracy
 Hoyt, Edward E. Detroit
 Holbrook, J. S. Mankato
 Holcomb, O. W. St. Paul
 Hollands, Wm. Fisher
 Holman, C. J. Mankato
 Holte, H. Crookston
 Hood, Mary E. Albert Lea
 Hopkins, Mary P. White Bear
 Horning, D. W. Minneapolis
 Horve, Hans N. Duluth
 Hovorka, T. W. Glencoe
 Hughes, Jane C. Mankato
 Hulburd, H. L. Morris
 Humiston, Ray. Worthington
 Humphrey, E. W. Moorhead
 Huennkens, E. J. Minneapolis
 Hunt, F. N. Blue Earth
 Hunt, H. E. St. Paul
 Hunt, R. C. Blue Earth
 Hunt, W. A. Northfield
 Hunte, A. F. Truman
 Hunter, C. H. Minneapolis
 Hurst, J. B. Little Falls
 Hutchins, E. A. Minneapolis
 Huxley, F. R. Fairbault
 Hvostlef, Jakob Minneapolis
 Hvostlef, J. C. Lanesboro
 Hynes, James Minneapolis
 Hynes, J. E. Minneapolis

Ide, A. W. Brainerd
 Ingram, L. C. Zumbrota
 Irvine, H. G. Minneapolis
 Irwin, A. F. Cleveland, Ohio

Jacobs, A. C. Elmore
 Jacobs, J. C. Willmar
 Jacobson-Keats, Julia M.
 Harvey, N. D.
 Jackola, John Duluth
 Jacquot, G. L. Ivanhoe
 James, J. H. Mankato
 Jellison, E. R. Foley
 Jensen, J. C. Hendricks
 Jensen, M. J. Minneapolis
 Jensen, T. Spring Grove
 Jern, J. H. Duluth
 Johnson, A. E. Madison
 Johnson, A. E. Minneapolis
 Johnson, Asa M. St. Paul
 Johnson, Christian Willmar
 Johnson, C. H. Austin
 Johnson, Einer W. Bemidji
 Johnson, H. Amanda.
 San Francisco, Calif.
 Johnson, Hans Kerkhoven
 Johnson, H. C. St. Paul
 Johnson, H. M. Dawson
 Johnson, H. P. Fairmont
 Johnson, Julius Minneapolis
 Johnson, J. V. Eveleth
 Johnson, Nimrod A. Minneapolis
 Johnson, Oscar V. Sebeka
 Johnson, Otto F. Winthrop
 Johnson, T. H. St. Paul
 Jones, D. N. Gaylord
 Jones, G. M. Minneapolis
 Jones, Herbert W. Minneapolis
 Jones, S. S. Frazee
 Jones, W. A. Minneapolis
 Joyce, Geo. T. Rochester
 Judd, E. S. Rochester

Kaess, A. J. Fargo, N. D.
 Kalinoff, D. Stillwater
 Kamp, Byron A. Alden
 Kane, J. P. Delano

Kannary, E. L. St. Paul
 Kanne, C. W. Arlington
 Karn, B. R. Ortonville
 Karn, J. Ortonville
 Kauffman, John H. Dassel
 Keam, A. P. St. Paul
 Kelly, B. W. Aitkin
 Kelly, E. S. Minneapolis
 Kelly, T. C. Mankato
 Kelly, W. D. St. Paul
 Kemp, A. F. Mankato
 Kennedy, Jane F. Minneapolis
 Kenyon, Paul E. Wadena
 Kern, Max J. St. Cloud
 Kerrick, Stanley E. Minneapolis
 Keyes, C. R. Duluth
 Keyes, E. D. Winona
 Kiefer, M. A. Sleepy Eye
 Kierland, P. E. Mahanomen
 Kimball, H. H. Minneapolis
 King, A. E. Minneapolis
 King, Emil Fulda
 Kinney, R. H. Lake Benton
 Kirghis, A. J. Sauk Center
 Kirmse, G. W. Frazee
 Kistler, A. S. St. Paul
 Kistler, C. M. Minneapolis
 Kistler, J. M. Minneapolis
 Kittelson, T. N. Fergus Falls
 Kjelland, J. S. Crookston
 Knauff, M. K. Two Harbors
 Knickerbocker, Frank H. Staples
 Knight, H. L. Minneapolis
 Knight, Ray Robert. Minneapolis
 Knights, F. A. Minneapolis
 Koch, J. C. Blackduck
 Kohler, Geo. A. Minneapolis
 Kraft, Peter Duluth
 Kriedt, Dan'l Minneapolis
 Krueger, L. W. Mapleton
 Kuhlmann, August. Melrose
 Kuske, A. L. Sanborn
 Kuth, J. R. Duluth

Lalonde, Edmond St. Paul
 Lamb, Harold L. Sauk Center
 Lampton, H. G. Minneapolis
 Landeen, F. G. Stillwater
 Laney, R. L. Holloway
 Lankester, Howard St. Paul
 Lapierre, C. A. Minneapolis
 Larsen, C. O. St. Paul
 Larson, O. L. Zumbrota
 Law, A. A. Minneapolis
 Leavitt, H. H. Minneapolis
 Leavitt, Frederick E. St. Paul
 Leck, Clifford C. Austin
 Le Clerc, Joseph E. Le Sueur
 Lee, K. J. Minneapolis
 Lee, Thos. G. Minneapolis
 Lee, Wm. P. Northfield
 Leebens, John H. Lismore
 Leibold, H. H. Parkers Prairie
 Leigh, H. L. Lakefield
 Leland, J. T. Herman
 Leland, M. N. Minneapolis
 Lemieux, Israel. Red Lake Falls
 Lemstrom, Jarl Minneapolis
 Lenont, C. B. Virginia
 Le Pak, Francis J. Duluth
 Lerche, Wm. St. Paul
 Lester, C. A. Alexandria
 Leutv, Amos Morris
 Lewis, C. B. St. Cloud
 Lewis, C. F. Austin
 Lewis, Edwin J. Sauk Center
 Lewis, J. D. Minneapolis
 Lewis, J. M. Minneapolis
 Lewis, W. W. St. Paul
 Lexa, F. J. Lonsdale
 Liedloff, A. G. Mankato
 Lima, L. Monticello
 Lind, A. Minneapolis
 Lind, C. J. Minneapolis
 Lindberg, A. C. North Branch
 Linde, Herman Cyrus
 Linneman, N. L. Duluth
 Linton, W. B. Minneapolis
 Litchfield, John T. Minneapolis
 Little, J. W. Minneapolis
 Little, W. J. St. Paul
 Litzenberg, J. C. Minneapolis
 Loberg, A. F. Minneapolis
 Lockwood, L. S. O. Minneapolis
 Long, Jesse Minneapolis
 Love, Geo. A. Preston
 Lowe, L. M. Glyndon
 Lowe, T. Pipestone

Lowthian, G. H. Akeley
 Luedtke, G. H. Fairmont
 Lufkin, H. M. St. Paul
 Lum, C. E. Duluth
 Lumley, W. A. Raymond
 Lundholm, E. M. St. Paul
 Luther, Clara M. Minneapolis
 Lynam, F. Duluth
 Lynch, M. J. Minneapolis
 Lyng, John Alexandria
 McAuliffe, J. Duluth
 McBroom, D. E. Northfield
 McCabe, W. F. Duluth
 McCarthy, W. J. Madella
 McClanahan, J. P. Ely
 McCloud, C. N. St. Paul
 McCollom, C. A. Minneapolis
 McComb, C. F. Duluth
 McCord, E. W. St. Paul
 McCoy, Mary K. Duluth
 McCuen, J. A. Duluth
 McDaniel, Oriana Minneapolis
 McDavitt, Thos. St. Paul
 McDermott, T. E. Minneapolis
 McDonald, H. N. Minneapolis
 McDonald, I. C. Minneapolis
 McDougal, D. W. Le Sueur
 McEachran, A. Minneapolis
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 McGiffert, E. N. Duluth
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 McIntyre, G. W. St. Peter
 McKeon, E. G. Edgerton
 McKeon, James Montgomery
 McKeon, Owen St. Paul
 McKinstry, H. L. Red Wing
 McLaren, Jennette M. St. Paul
 McLaughlin, J. A. Minneapolis
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 McMahon, Chas. Coppsville, Tenn.
 McMasters, James M. Sauk Center
 McMichael, O. H. Vernon Center
 McNevin, C. F. St. Paul
 MacCarty, W. C. Rochester
 Macbeth, J. L. St. Clair
 Macdonald, A. Morristown
 Macdonald, Angus St. Paul
 Macdonald, J. W. Minneapolis
 MacLaren, Archibald St. Paul
 Macnie, J. S. Minneapolis
 Magie, W. H. Duluth
 Magnusson, G. A. Minneapolis
 Magnusson, Herman V. Aitkin
 Naguire, M. F. Minneapolis
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 Maland, C. O. Minneapolis
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 Maloy, Geo. E. St. Cloud
 Mann, A. T. Minneapolis
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 Marken, M. H. Dawson
 Markoe, J. C. St. Paul
 Martin, T. R. Minneapolis
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 Maurer, E. L. Brownton
 Maury, J. W. Draper. Rochester
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 May, C. C. Adrian
 May, W. H. Minneapolis
 Mayland, M. L. Faribault
 Mayo, C. H. Rochester
 Mayo, W. J. Rochester
 Mee, P. H. Gaylord
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 Meade, Charles J. St. Paul
 Meighen, J. W. Ulen
 Mellicke, W. A. Janesville
 Melby, O. F. Thief River Falls
 Meleck, H. N. Minneapolis
 Merrill, B. J. Stillwater
 Merrill, J. E. Amboy
 Merritt, Geo. F. St. Peter
 Mesker, G. H. Olivia
 Metcalf, J. N. Monticello
 Meyer, E. L. Minneapolis
 Meyerding, F. A. St. Paul
 Mikkelsen, M. Wells
 Miller, C. T. St. Paul
 Miller, F. C. Olivia
 Miller, Hugo H. Minneapolis
 Miller, Victor I. Westbrook
 Miller, W. A. New York Mills
 Millsbaugh, J. G. Little Falls
 Mintener, J. W. Minneapolis
 Mitchell, Frederick. St. Paul
 Mitchell, I. C. Minneapolis
 Mitchell, R. S. Grand Meadow

Moe, Anton J. Heron Lake
 Moen, J. K. Minneapolis
 Moir, Wm. W. Excelsior
 Monahan, J. A. Minneapolis
 Moore, J. E. Minneapolis
 Moore, J. T. Minneapolis
 Moore, W. J. Wood Lake
 More, C. W. Eveleth
 Moorehead, Martha B. Minneapolis
 Morehouse, G. G. Owatonna
 Moren, E. Minneapolis
 Morell, W. N. Verndale
 Mork, B. O. Worthington
 Morley, G. A. Crookston
 Morris, Minor Hopkins, Minn.
 Morse, Clarence R. Coleraine
 Morse, John H. Minneapolis
 Mortensen, N. G. St. Paul
 Morton, H. McI. Minneapolis
 Moynihan, A. F. Sauk Center
 Moynihan, T. J. St. Paul
 Muir, Edwin S. Winona
 Muir, J. B. Hallock
 Mullin, R. H. Minneapolis
 Murdock, A. J. Minneapolis
 Murdock, H. G. Taylors Falls
 Murphy, Ignatius J. Duluth
 Murphy, W. B. Minneapolis
 Murray, D. D. Duluth

Nannestad, J. R. Albert Lea
 Nass, H. A. Mabel
 Nauth, W. W. Minnetonka
 Nelson, C. P. Minneapolis
 Nelson, H. E. Crookston
 Nelson, H. S. Minneapolis
 Nelson, J. C. St. Paul
 Nelson, L. A. St. Paul
 Nelson, M. S. Mora
 Nelson, N. A. Clarkfield
 Neraal, P. O. Cannon City, Colo.
 Neumann, W. H. Lewiston
 Newhart, Horace Minneapolis
 Newkirk, H. D. Minneapolis
 Newman, G. A. Stillwater
 Nicholson, Elmer Minneapolis
 Nicholson, Joseph Brainerd
 Nickerson, B. S. Glencoe
 Nickerson, M. L. Minneapolis
 Nickerson, W. S. Minneapolis
 Nippert, H. T. St. Paul
 Nipper, L. A. Minneapolis
 Nissen, Henrik Minneapolis
 Nootnagel, C. F. Minneapolis
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 Norred, C. H. Minneapolis
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 Norton, H. G. St. Paul
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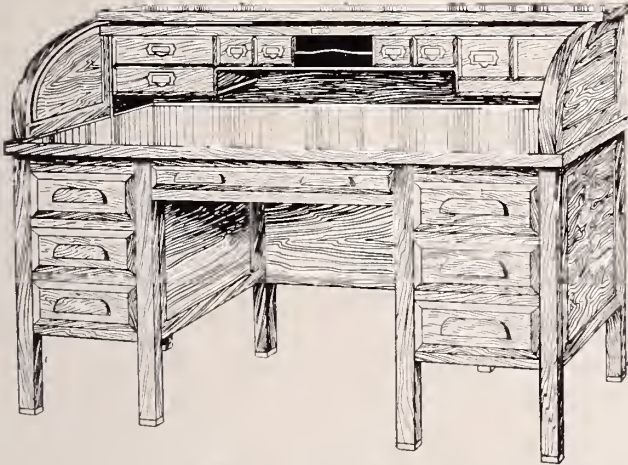
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This hospital and sanitarium is beautifully located, and is under management that commends it to all medical men. The building is thoroughly equipped, and its capacity is thirty patients. Its staff is composed of some of our best St. Paul men, in addition to Dr. Clark of Stillwater and Dr. Poirier of White Bear.

Dr. Mary P. Hopkins is the physician in charge, and she is thoroughly equipped in every respect for this kind of work.

SPECIAL SUMMER COURSES

The Chicago Polyclinic and Hospital announces on another page their special summer courses, which begin May 1st and continue to September 1st. These courses are very attractive, and they are attended probably by more medical men from the Northwest than go to any other institution for special post-graduate work. The Polyclinic is a well-equipped institution with a corps of high-class teachers.

THE JOURNAL OF THE MINNESOTA STATE MEDICAL

FIRE-PROOF GARAGES OF METAL

The Metal Shelter Co., of St. Paul, illustrates in their card in our advertising columns a type of fire-proof garage that cannot fail to commend itself to every one who wants an easily erected, durable and artistic garage. As these houses are made of all sizes, and as anybody can put one together in a very short time, they meet a real need. The Company issues a handsome catalogue, which will be sent to any one who applies for the same. Address The Metal Shelter Co., St. Paul.

PURE BARLEY FLOUR

The Minne-Paul Cereal & Milling Co., of Carver, Minn., is directing the attention of physicians to a new and specially prepared barley flour particularly intended for medicinal purposes, and for which are claimed great purity and fineness. This product, known as F. N. Johnson's Pure Barley Flour, is the result of scientific milling, the process for which has been perfected by F. N. Johnson after a period of over seven years' study and research.

It is said that through the Minne-Paul company's process of milling the natural oils found in barley are brought out to such an extent that the flour is of rare value in the treatment of intestinal disorders.

The Minne-Paul people court the severest tests on this flour and are willing to send a pound package gratis to any physician interested and seeking a medical barley flour of the highest grade and purity to prescribe for infants or invalids.

Manufacturers throughout the country for many years have tried to produce a high grade of barley flour for physicians' use, but up to now the Minne-Paul company is the only one in the United States to successfully mill a barley flour suited for the sick-room.

SANITARIUM ENVIRONMENT

In the past the difference between the environment of the home and the sanitarium has been so great that the change has been dreaded by patients and their families; and this change from one to the other has had a most depressing effect upon the patient. To lessen this difference and this effect without impairing the efficiency of the sanitarium has been, and is yet, a great problem.

Dr. Arthur B. Rogers, of the Oconomowoc (Wis.) Health Resort, claims that practically all of the "institutional" atmosphere has been banished from their sanitarium. Its location in the Lake Region of Wisconsin, its limited number of patients (25), its arrangement of rooms abolishing the depressing corridor effects, its careful supervision of all the necessary attendants, skilled and unskilled, make it like a resort for those seeking rest and pleasure.

With such skill in planning and conducting an institution for mental cases the most speedy and permanent results will be obtained.

A RESTFUL ABDOMINAL BINDER

There is one very important thing that can be said about the Storm "Abdominal Binder" that will commend it at once to every physician and that is, it never makes a patient nervous. On the contrary, it is common to have patients declare how rested and relieved they feel from wearing "Storm" Binders even though

abdominal binders, appendicitis belts, etc., keep patients constantly fretted by the sense of "being harnessed and saddled," as one bright woman described it, that it is a pleasure to recommend the "Storm" Binder with its absolute avoidance of unpleasant or "harness-like" effect. The Storm Binder is the last word in abdominal supports, and the medical profession have been quick to note its superior advantages.—American Medicine.

LAVORIS

The dust-storms of our spring and summer are well nigh equal to the "brain-storms" that are with us always. From the former there comes a train of evils whose ending no one can trace, but their beginning is seen in exceedingly severe throat troubles. One of the best therapeutic agents for this trouble is zinc chloride, and it can be found in no better form than in Lavoris, a preparation put on the market by the Lavoris Chemical Co. of Minneapolis. This preparation has received very high commendation from the medical profession.

A VALUABLE LOCAL ANESTHETIC IN ANORECTAL SURGERY

In view of current interest in quinine and urea hydrochloride as a local anesthetic, a report of Dr. Louis J. Hirschman, of Detroit, which appeared in a recent number of the Cincinnati Lancet-Clinic, has peculiar pertinency. Dr. Hirschman reports a total of 102 operations, comprising acute thrombotic hemorrhoids, internal hemorrhoids, interno-external hemorrhoids, external hemorrhoids, fistula in ano, perineal abscess, fissure in ano, excision of scar-tissue, Ball's operation (pruritus ani), hypertrophied papillæ, and inflamed Morgagnian crypts. Perfect results were obtained in every case so far as operative anesthesia was concerned, and in but seven cases was there any post-operative pain. The doctor uses the one-per-cent solution in all of his cases of anorectal surgery when suturing of the skin is required. The technic of administration is the same as that with weak solutions of cocaine and eucaine.

Dr. Hirschman believes that the substitution of quinine and urea hydrochloride for any of the other anesthetic salts hitherto employed will prove eminently satisfactory in all cases of anorectal surgery in which suturing of the integument is not required. He sums up its advantages as follows: It is soluble in water; it can be sterilized; it is equal to cocaine in anesthetic power; it is absolutely non-toxic; it has a pronounced hemostatic action; it produces persistent anesthesia; it is inexpensive.

Quinine and urea hydrochloride, in one-per-cent sterilized solution, is supplied by Parke, Davis & Co. in sealed glass ampoules of five cubic centimeters capacity. An ampoule is opened by breaking off the tip, when the hypodermic needle can be inserted in the neck of the ampoule and the solution drawn into the syringe. Parke, Davis & Co. issue a sixteen-page brochure on "Local Anesthesia with Quinine and Urea Hydrochloride" which should be in the hands of every physician and surgeon. The pamphlet details fully the uses of the new anesthetic, explains the technic of administration, and contains some valuable case-reports. A copy may be obtained by writing the company at its home offices in Detroit.

THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

Minneapolis, May 15, 1911

No. 10

PULMONARY AND CIRCULATORY COMPLICATIONS FOLLOWING SURGICAL OPERATIONS*

By E. H. BECKMAN, M. D.

ROCHESTER, MINNESOTA

In order to get a proper idea of the frequency of complications that occur after surgical operations, it is necessary to have a considerable number of consecutive cases. This report is based upon 3,657 consecutive cases operated upon at St. Mary's Hospital during the first eight months of the year 1910. The number is composed entirely of hospital cases, and does not include several hundred patients operated upon for minor ailments which did not require them to remain in the hospital.

For convenience, the pulmonary complications will be discussed under three headings, pleurisy, bronchitis, and pneumonia; and the circulatory complications, under phlebitis and embolism. Although the pulmonary complications are much more frequent than the circulatory, the mortality-rate is almost the same, six deaths occurring from pulmonary, and five from circulatory, complications.

Pulmonary complications.—Ether was used as an anesthetic, although cocaine as a local anesthetic has been used in a few cases. It is impossible to say just what bearing the anesthetic has upon the production of pulmonary complications. A pulmonary complication cannot be justly attributed to an anesthetic until it is possible to exclude the insufflation of material from the upper air-passages, sepsis, and septic emboli.

There were 37 cases of lung complications in the series of 4,530 cases, which means that 1 patient out of every 122, or .0081 per cent, had

some form of lung complication. It should be remembered that a large majority of these cases were extremely mild. There were 6 deaths in this group of 37 cases, a mortality of .0013 per cent.

Pleurisy.—There were 15 cases of pleurisy, or 1 case out of every 243 patients operated upon, a percentage of .0041. Most of these cases were extremely mild, often no more than a stitch in the side, and many of them had no rise in temperature. Two of them had an effusion which required aspiration, and one (a splenectomy) resulted fatally. Three of the patients had tuberculosis, although the lungs were not enough affected to produce physical signs of the disease. Two of the patients had carcinoma. Nine of the fifteen were abdominal operations. In 11 of the cases the symptoms occurred in the first week, and 4 in the second week.

Bronchitis.—There were 12 cases of bronchitis, none of them fatal. All of these cases were of a mild type, and subsided in a few days. Some of them had considerable expectoration; others were not much more than a congestion which soon subsided. All of these cases, with the exception of one which began on the ninth day, occurred the first five days following operation. All of them, with the exception of 2 inguinal hernias, were abdominal operations; 6 of the stomach, 3 of the gall-bladder, and 1 appendectomy and shortening of the round ligaments.

Pneumonia.—There were 10 cases of lobar pneumonia, 5 of which were fatal. Two of the fatal cases were in young adults who had had

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

comparatively simple operations; one a hernia, and the other a tuberculous synovitis of the wrist. Both developed delirium tremens, and died with a complicating lobar pneumonia. The other three cases were debilitated old men with arteriosclerosis. One of them was sixty-nine years old, operated upon for carcinoma of the lip and glands; another, eighty years old, operated upon for stone in the bladder, and the third, sixty-three years old, operated upon for gall-stones, had carcinoma in the tail of the pancreas. Of the five cases which recovered, one was an exophthalmic goiter for which a ligation of both superior thyroid arteries was performed. The anesthetic in this instance was cocaine. Two of the patients had inguinal hernia; one had the appendix removed secondarily, the other an operation for hypospadias. The fourth in this group had double pus tubes, and the fifth had gall-stones and also a tuberculous peritonitis. It will thus be noted that of the five fatal cases, two had delirium tremens, and three were old men, sixty-three, sixty-nine, and eighty years of age, respectively, two of them having cancer. Of the five patients who recovered, one had tuberculosis, one a considerable infection in the pelvis, and a third was operated upon under cocaine.

Circulatory complications.—There were 23 cases of complications related to the circulation; 17 of phlebitis, and 6 of embolism, one out of every 159 cases, a percentage of .0062.

Schachtler states that in embolism the temperature remains normal, but the pulse gradually increases until the onset of the lung symptoms. Our cases do not agree with this statement, as the pulse was practically normal in every case until the embolism occurred, although the temperature varied. Various authors give the percentage of pulmonary embolism following thrombosis, to be from 20 to 60 per cent. (Quenstedt, 20 per cent; Albanus, 43 per cent; Lubarsch, 59 per cent; Virchow, 60 per cent.) In this series it was 5 per cent.

The statement is made in the Lexer-Bevan Surgery that the most frequent site of the smaller emboli is in the lower lobe of the right lung. In the case which recovered, in our series, the symptoms all referred to this area.

Thompson and Bartlett state that pulmonary embolism occurs more often in the second to the fourth week. Our cases all occurred the first nine days.

Phlebitis.—There were 17 cases of phlebitis. Three occurred on the right side, and 13 on the

left side. This makes 1 case of phlebitis in every 215 operated cases, or .0046 per cent. In only one of the right-sided cases (an abscess appendix) can the operation be considered as limited to the right side of the body. Thirteen of the 17 cases followed after abdominal operations, and 4 were extra-abdominal. Five were infected cases, 2 at the time of operation, and 3 mild wound-infections, which developed later. In each instance the infection and the phlebitis appeared at about the same time. The individual cases are as follows:

- 2 abscess appendixes.
- 1 appendix and ovarian cyst.
- 2 double inguinal hernias.
- 1 left inguinal hernia.
- 1 ovarian cyst.
- 1 double varicose veins.
- 2 perineal prostatectomies.
- 5 abdominal hysterectomies.
- 1 gastrectomy.
- 1 perineum.

Two of these patients had malignant disease; the gastrectomy case, and one of the hysterectomies.

The days upon which the phlebitis appeared are as follows:

Eighth day	3 cases.
Ninth day	2 "
Tenth day	4 "
Twelfth day	4 "
Thirteenth day	2 "
Fourteenth day	2 "

It will be noted that all of the cases appeared in the second week.

Embolism.—There were 6 cases of embolism, 2 cerebral, both fatal. Four were pulmonary, 1 recovered, 3 died. In our series there was, therefore, 1 case of embolism in every 609 cases, and there was 1 fatality in every 731. One case occurred on the day of operation; 1, fifty-six hours following operation; 2, on the eighth day; and 2 on the ninth day following operation. In only one case was there evidence of infection either at the time of operation or at autopsy. In one case there was a phlebitis with thrombosis of the left femoral vein. This is the only case which has occurred in several years in this clinic, where there was embolism when a phlebitis was known to be present. The ages of the patients were thirty-five, forty-three, forty-five, forty-five, forty seven, and sixty years, respectively.

Case 1.—Male, aged 35 years; no previous disease; for two years, mild attacks of abdominal colic; seven days before the operation he had sudden, severe abdominal colic, which later localized at the appendix with formation of tumor. The abscess was drained, no attempt being made to remove the appendix. The temperature at the time of operation was 103° ; pulse, 120. The morning following the operation the temperature was 99° ; pulse, 100; and they remained practically at these points until the patient's death, which was instantaneous, and occurred fifty-six hours after the operation. The patient was seen five minutes before his death by one of the house-officers. He said he felt well and had no pain. Autopsy revealed a large abscess in the right iliac fossa, entirely walled off from the remainder of the abdomen. The right pulmonary artery contained a large clot.

Case 2.—Male, aged 57 years. Three years before he began having stomach distress after eating, with belching of gas and some vomiting, which relieved the pain. These attacks gradually became worse, and he had lost forty-three pounds during the last year. Malignancy was suspected before operation. There was a small umbilical hernia. Operation revealed a Meckel's diverticulum about three feet above the ileocecal valve, which was inverted and caused intussusception at its base. The diverticulum was removed. Seven hours after the operation the patient became drowsy, had difficulty in talking, and had a paralysis of his left arm and leg. He died twelve hours after the operation. Autopsy disclosed a clot in the middle cerebral artery on the right side. There were a slight arteriosclerosis and some vegetations on the heart valves.

Case 3.—Female, aged 45 years; married; mother of three children; complains of pain in pelvis when on feet; some dyspnea upon exertion; heart, negative; trace of albumen in the urine, and a few hyaline casts.

Operation: hysterectomy for fibroids. Lipoma of left breast removed. The patient appeared to be doing well except that she had a temperature between 99° and 102° , which lasted until her death. There was a mild phlebitis of the left femoral vein with some swelling of the thigh for two days. She died instantly on the ninth day. Autopsy was performed some hours after the body had been injected. The abdomen was negative. No clots could be discovered after a thorough search except in the left femoral vein.

Case 4.—Female, aged 43 years; married; one child, thirteen years old. The patient came because of severe uterine hemorrhage, which had lasted seven weeks. She was anemic and weak from loss of blood.

Operation: abdominal hysterectomy. The patient had a double uterus. She made a good recovery from the operation. Her temperature did not go above 100° after the second day, and the pulse was never above 90. On the eighth day she complained of feeling weak; had sudden dyspnea and rapid pulse; and died within an hour. An examination through the operation-wound only, was permitted. The abdomen was negative.

Case 5.—Female, aged 45 years; married; mother of four children; typhoid at eleven years of age; gall-stone colic for eighteen years.

Operation: appendectomy; cholecystostomy for stones. She had uneventful recovery up to the ninth day. The temperature normal after the third day, with pulse ranging from 80 to 100. On the ninth day she had sudden pain all over the chest. There was marked dyspnea. The temperature became subnormal; the pulse, 140; and weak. Patient looked about to die, but she gradually though slowly improved. There was an area of dullness in the lower lobe of the right lung, and she was not free from pain in this region for three weeks. She had several periods, lasting from two to three days, when the pain in the lung became severe, the temperature would rise, and she would cough up blood streaked with mucus. These attacks were attributed to a breaking down of the tissue in the infarcted area of the lung. There was no effusion into the pleural cavity at any time. The patient was well three months after the operation.

Case 6.—Male, aged 60 years. Arteriosclerosis. Frequency of micturition for two years. Acute retention three weeks before operation.

Operation: perineal prostatectomy. Patient had normal temperature and pulse after the third day. On the eighth day he had increasing dyspnea and a rapid pulse. He died twenty-four hours after the onset of symptoms. A pulmonary embolism was found at autopsy.

DISCUSSION.

Dr. W. A. Dennis (St. Paul): I feel we are very much indebted to Dr. Beckman for this excellent paper. These cases are always extremely interesting and often distressing, particularly those of embolism, and it is important that we study them carefully and get as much information as possible concerning them. There is some difficulty in their classification. Many of the

cases classified under lung complications are unquestionably due to embolism. Small emboli from the site of the operation lodge in the lung and result in infarct, which is diagnosed as pleurisy, but may result in a pneumonia, while the larger ones plug the pulmonary artery and result in death in a very short time. Gussenbauer made a statement that in all cases of incarcerated hernia followed by pneumonia, the trouble was due to embolism, and I believe this is true.

In the consideration of embolism there are a number of questions to be taken into consideration. What is the cause of it, and how can one recognize the imminence of embolism? There are many theories and there is no one cause capable of explaining all cases. Any condition which causes the blood to stagnate or to clot in the veins tends to produce the condition, and I am inclined to think that one factor is a mild infection, one that is sufficient to produce a thrombosis, but not severe enough to cause it to break down. It appears to me that pleurisy following operation, especially if there is a slight temperature not accounted for by the condition of the wound, should make us apprehensive of the possibility of thrombosis, and since having an unfortunate experience I have made it a point to keep the patient with these symptoms absolutely quiet until they have disappeared.

Dr. E. H. Beckman (Essayist): The point is true, as brought out by Dr. Dennis, that a great many of our

lung complications are undoubtedly due to embolism. We have no way of knowing which complications are due to embolism and which are not, and for that reason I classified cases due to embolism, and which we knew were due to that cause, as embolism, and classed the rest under lung complications. You hear a great many theories given as to the cause of embolism, such as sepsis, pressure upon the veins, and pressure of tumors. Undoubtedly, one of the most frequent causes is traumatism to the area around the point of sepsis where there is a thrombus at the time of operation, also pressure on the larger vessels from the rough handling of the tissues at the time of operation, which might make a break in some vein and which would cause a clot at that point and bring on a tendency toward thrombus with a later embolism.

The time has passed when we can say that so many of our lung complications come from the anesthetic; a great many of them are due to septic emboli in various parts of the body. Some authorities say that as high as five per cent of cases of septic appendicitis are followed by thrombus of the vessels interfered with by the operation, and if that is true there is no reason why a large percentage of our septic cases should not be followed by septic emboli in the lungs, and undoubtedly in the past we have attributed to anesthesia a great many of our lung complications which should rightfully have been attributed to septic emboli.

AUTOGENOUS VACCINES IN THE TREATMENT OF MIXED INFECTIONS IN PULMONARY TUBERCULOSIS*

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OTTAWA, ILLINOIS

The importance of mixed and secondary infections in pulmonary tuberculosis is, at present, a much disputed question. Some observers believe the tubercle bacillus is responsible for all the damage, while others contend that the tubercle bacillus is of little or no importance and that the organisms of mixed and secondary infection cause the pathological conditions found. Between these two extremes of opinion are those workers taking the middle ground, some assigning the maximum rôle to the tubercle bacillus, others assigning the maximum rôle to the organisms of mixed infection. This disparity in views is due to the inaccuracies of the methods used in studying the problem.

Bacteriological and histological examination of the lung after death, is not reliable because of terminal, agonal, and post-mortem invasion. Animal experimentation in this field has shown but little. Prudden¹ found secondary infection responsible for cavity formation in rabbits, but

Marmorek² was able to produce cavities with pure cultures of the tubercle bacillus, if used together with strong tubercle toxins.

Examination of the sputum is of little value. It is a well known fact that all the organisms of mixed infection in tuberculosis are present in the healthy mouth, pharynx, and trachea; and a smear from the secretions of the pharynx of a normal individual does not differ in microscopical appearance from a smear of tubercular sputum except in the absence of tubercle bacilli.

Wirths³ considers the opsonic index of value. I have found the opsonic index to the streptococcus, pneumococcus, and staphylococcus to be normal in 39 out of 40 cases of pulmonary tuberculosis examined. In my hands, at least, the opsonic index is of no diagnostic value in this connection.

A leucocytosis in tuberculosis is supposed to be indicative of mixed infection, but the results of

*Work done under the Max Pam Research Fund.
1. Prudden (T. M.) New York Medical Journal, 1894, LX, 1-11.

2. Marmorek (A.). Compt. Rend. Soc. de Biol. Par. 1904, LXI, 60.

3. Wirths (M.). Beiträge z. Klin. d. Tuberkulose, Wurzburger, XII, 159.

various workers are confusing. The author has found a leucocytosis in pulmonary tuberculosis to be very frequent. The results of examination of 112 cases is shown in the following table:

Chart 1.

Cases examined.	No.	Average Number cases showing Leucocyte Count.	Leucocytosis.
Incipient	16	11,963	11
Advanced	84	14,783	57
Far advanced	12	15,820	10

For literature on the subject of leucocytes in tuberculosis Ullom and Craig, National Association Study and Prevention of Tuberculosis, Vol. 1, may be consulted.

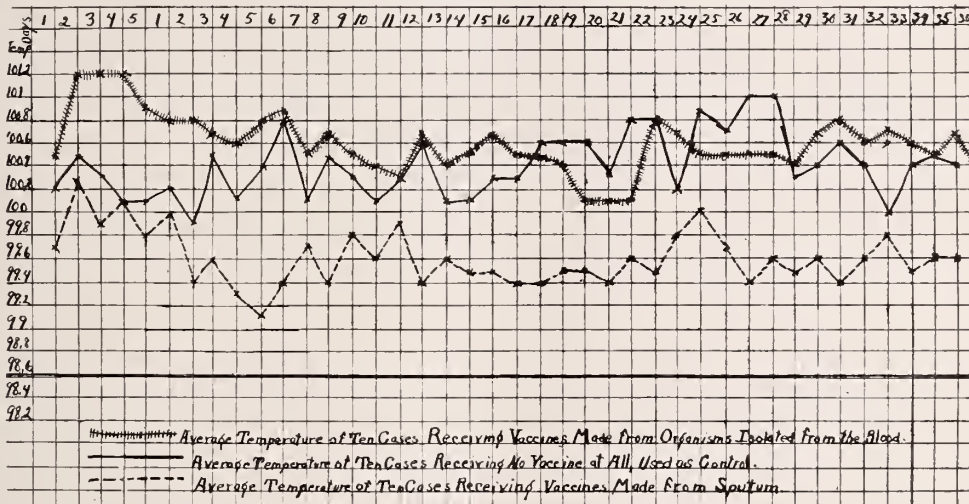
During the past year—January, 1910, to January, 1911—I have made blood-cultures on 100 cases of tuberculosis in all stages of the disease, drawing about 20 c.c. of blood from a vein under

from the blood have been administered in 22 cases, and autogenous vaccines made from organisms isolated from the sputum have been administered in 32 cases.

A study of the criteria of improvement in pulmonary tuberculosis has been made on these cases, and comparison with groups of cases of the same kind not receiving vaccines have been made.

It was early determined that comparison of weight was not a reliable basis for comparison—putting on fat does not necessarily mean a healing of the pulmonary lesion. The amount of expectoration was found to be an inaccurate indicator. The physical findings, except from month to month, are of little value in determining their action, and some cases not receiving

Chart 2.



aseptic conditions and cultivating in bouillon and agar. I have been able to isolate the streptococcus and pneumococcus in 35 cases, or 35 per cent. This blood-culture method gives direct evidence, and these results, I believe, show conclusively that mixed infection is an important factor in pulmonary tuberculosis.

Active immunization with tuberculin has been used against the tubercle bacillus with fairly good results, but if the organisms of mixed infection are responsible for a share of the damage done, active immunization against these organisms should also be of value. Because the secondary organisms are not the same in all cases, autogenous or personal vaccines should be used if direct treatment is to be of any value. Autogenous vaccines made from organisms isolated

vaccines have improved as markedly and as rapidly as cases receiving them. The opsonic index in a series of 15 cases showed an increase after inoculation, but the opsonic index, at present, is not considered a reliable indicator of recovery. A study of the temperature should show some results, especially if the temperature is caused by the organisms of mixed infection. The study of the temperature-curve in individual cases yields but little; marked positive, doubtful, and negative results are found in cases receiving and cases not receiving vaccines. Therefore, in order to obtain as nearly a just comparison of results as possible, the average of a number of cases should be made the basis of comparison.

In 10 cases receiving autogenous vaccines

made from the sputum, the afternoon temperature from five days before the first injection of vaccine to forty-five days after the first injection, was taken and a daily average of the 10 cases made. This gave the average temperature of the 10 cases for the period during which vaccines were administered. Ten cases showing similar lesions were selected from the group receiving autogenous vaccines made from organisms isolated from the blood, and the average temperature of this group was obtained in the same manner and for the same length of time. Ten cases showing similar lesions were selected from cases not receiving vaccines at all and recorded and averaged in the same way. All recorded cases were subjected to the same conditions of housing, diet, exercise, season, climate, etc. In fact, extraneous conditions were equalized as nearly as possible. The average temperature of each of these groups was plotted graphically. (See Chart 2.) A comparison of these curves shows very plainly that autogenous vaccines made from organisms isolated in blood-cultures have no effect on the temperature, while

autogenous vaccines made from organisms isolated from the sputum have a marked reducing effect on the temperature. Vaccine, in all cases, was administered every five to ten days. There were 4 moderately advanced, 5 advanced, and 1 far-advanced case in each group selected for comparison. From a study of these averaged temperature curves the following conclusions are drawn:

1. Autogenous vaccines made from organisms isolated directly from the blood-stream in pulmonary tuberculosis have practically no effect on the temperature.

2. Autogenous vaccines made from organisms isolated from the sputum reduce the temperature in pulmonary tuberculosis.

3. No explanation for the marked difference in results in cases receiving vaccines made from organisms isolated from the blood and cases receiving vaccines made from organisms isolated from the sputum can be made except as is shown by the difference in results in vaccine therapy observed in localized and systemic infections in general.

SUDDEN DEATH IN CARDIOVASCULAR DISEASE*

By GROSVENOR CROSS, M. S., M. D.

MINNEAPOLIS

In the lay mind, heart disease is always associated with the thought of sudden death. "Heart failure" occurs to the average patient as the probable end of heart disease. The fallacy of such a notion need not be explained. That certain forms of cardiac lesions are more likely to lead to a sudden taking off, is undoubtedly true. It is well known that in Corrigan's disease sudden death is more common than in other valvular lesions.

It has been the writer's experience that sudden death occurs in cases which exhibit no valvular lesions, or in which diseased valves were only one of many factors in heart weakness.

The following cases are briefly cited because they illustrate some of the more usual types of sudden death in patients who have heart or circulatory lesions:

CASE 1.—A very active business man, aged 39, of sedentary habits; anemic and overweight; periodically, an excessive smoker and drinker;

noticed pain in his jaws, back of his neck, and down the left arm to the fingers; pain was as severe as a "toothache"; it was always brought on by exertion, as walking, or climbing stairs, but the pain stopped immediately if he remained quiet; no signs of urinary trouble; no edema.

At the single examination which I made, he showed a slight left-sided enlargement of the heart. Pulse was regular, but increased from 75 to 100 beats on rising to a sitting posture. There was no increase of dullness over the base. Over the sternum, between the third costal junctions, a very slight low-pitched systolic murmur could be made out with difficulty, indicating its origin in the beginning of the aorta, and the diagnosis of cardiosclerosis, with attacks of angina pectoris, was simple. He insisted on making a business trip the next day, and was found dead in bed the second morning. An imperfect report of the coroner's autopsy showed some dilatation of the beginning of the aorta, with patches of degeneration. Coronaries and heart walls were not, apparently, examined.

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6 1910.

CASE 2.—A retired business man of 58, of unusually good habits and physique, was examined four weeks after the onset of what was called the "grip." He was moving about the house, and eating and sleeping poorly. There was edema of the face, and dependent parts to the hips; an irritating cough. The heart was not enlarged to percussion; the pulse very irregular, 100 to 120, and the pulse-wave was extremely variable, and always lacking in force; no murmurs. Under rest and other treatment the edema and cough disappeared promptly, the heart regained much in regularity and force, but still remained weak. He was not allowed to get up, but on a hot night went upstairs to sleep, and accomplished it without distress. The next evening he was found deeply cyanosed, and suddenly expired from pulmonary embolism.

CASE 3.—A robust farmer of 5, with lobar pneumonia, involving upper right lobe; progressed well up to the fifth day after onset. His pulse was rapid and showed toxic effect on the heart, but was regular. He developed a rapid distention of the abdomen, from gas, and suddenly expired. No autopsy. Pressure on the right ventricle, from the distended abdomen, was assumed to be the acute cause of death, though dilatation of abdominal veins, as Forcheimer suggests, may have contributed by depriving the right heart of its supply.

CASE 4.—Druggist, aged 35, had been ill three months with a weak heart, probably chronic infectious endocarditis, simulating typhoid. The heart was rapid and lacked force. There was a soft mitral systolic murmur, and no exertion was permitted. Following a rather severe coughing spell at midnight, he became suddenly unconscious, with labored breathing, and expired after two hours, from gradual heart failure. This was a case of pulmonary thrombosis.

CASES 5 AND 6.—Heard¹ reports two cases of sudden death in connection with diphtheria, both following slight exertion. In one, a child of six, the diphtheria had been a recent event, leaving a weak heart. In the other, the heart had never been strong since an attack of diphtheria many years previous.

CASE 7.—A professional man of 37, had had for an unknown period aortic stenosis; pulse was always small, but compensation was good, and he suffered no inconvenience, except from the overaction of his enormously enlarged heart, when fatigued. At such times he had palpitation and tachycardia, but no pain. While eating his

noon meal he was attacked suddenly with chest pain of a severe character, and on reaching his office vomited several times, with some relief; the pain, however, continued until nitrites were given. Heart-action was not, apparently, increased at any time during this attack. He passed the next day in comparative comfort in bed, although he had occasional attacks of pain in the cardiac region, which radiated into the left shoulder and arm, and expired suddenly the following night.

Besides these particular cases, we all have in mind instances of death occurring suddenly in subjects of myocardial trouble, after a hearty meal. Myocardial degeneration in diabetics, also furnishes cases of sudden death from heart failure. Rupture of the heart wall is not infrequent. Thrombus^{2 3} in the heart itself, either attached to the wall or free in the form of ball thrombi, are occasionally found, post-mortem, to account for death. We have also the sudden end of cases of aneurysm which occur sometimes before a diagnosis has been made.

It is obviously impossible to foresee many of the cases of sudden death, of which the above are examples. It is difficult to make a working classification of the causes of such a termination. In some cases death is caused by failure of the heart-muscle itself to contract in the face of a suddenly occurring obstruction, as an embolism. In other instances, as in the entrance of air into the circulation, the heart-power may be sufficient, but it is working against an elastic air-cushion, instead of the inelastic blood-column, and cannot therefore force blood on into the circulation. A similar train of events happens in cases of abdominal blows, or large and sudden hemorrhage, or in abdominal distention, which deprives the right heart of its supply. In the majority of cases of sudden death, however, it is the failure of the heart-muscle to contract that is the immediate cause of death. A heart therefore which has been the subject of chronic degenerative changes, is more liable to such an accident than one which contains uniformly sound contracting fibres. Such hearts often show, by microscopic examination, fibres of inelastic tissue or muscular fibres which present cloudy or even fatty degeneration. It is clear that such a heart-muscle lacks in power of contractility in two ways, both because the inelastic tissues offer a mechanical obstacle in themselves, and because there is less of true muscular tissue in proportion to the whole organ. Such a heart is apt to give, under care-

ful clinical examination, some signs of its lack of power, but not always. It may go on doing the work it is ordinarily called upon to do, and give no sign of weakness. Under certain conditions, however, as acute infectious diseases or unusual exertion, such a heart-muscle becomes more or less exhausted, and if an extra call is made upon it, may fail at once. Acute heart failure, in this sense, occurs as in the cases of typhoid and pneumonia, above cited, when the heart is weakened by the acute toxemia of the disease alone. There is undoubtedly a cumulative effect which exhausts the heart in cases of fever, and in tachycardia from any cause. The heart beats more rapidly, the diastolic rest is imperfect, and in cases of sudden need for extra heart-power, it may fail to respond, and death ensues at once.

Undoubtedly, sudden death often occurs as a result of direct pressure of the diaphragm on the heart, when it, in turn, is pushed upward by an over-distended stomach or bowel. It is observed in two groups of cases: In one, the individual has had for some time a damaged heart, generally a myocardial weakness, with or without valvular lesion. The other group includes cases of acute illness, as typhoid, pneumonia, or diphtheria, with some toxic or infectious damage of the heart-muscle; in such, meteorism is a positive danger. Broadbent⁴ recognizes this as a frequent cause of death, and explains it in a very simple way: The right ventricle lying directly on the diaphragm, whenever upward pressure is great enough to interfere with the proper filling and emptying of this chamber, the circulation suffers. If this pressure of the diaphragm is great enough, it may stop heart-action almost at once.

What Mackenzie⁵ terms "the reserve power" of the heart, is, after all, the factor which is most to be reckoned with in judging of the prognosis in heart lesions. If the heart can rise to the extra demand which its owner may put upon it, the outlook is better; if, on the other hand, slight exertion causes distress, or gives signs of weak heart-action, we must be prepared to warn the patient that his heart-power must be conserved just so much more.

It is interesting, in connection with prognosis in heart disease, to refer to some statistics quoted by Cabot⁶ at the St. Louis meeting of the A. M. A.

Comparing clinical diagnosis with autopsy findings, chronic myocarditis was diagnosed in

only 22 per cent of those cases in which pathological examination showed its presence.

With these facts in mind we may inquire whether it is possible to foresee sudden death in heart disease.

By study of tracings, which show the action of auricle and ventricle, together with the observation of the blood-pressure, indicating the amount of resistance the heart encounters, we may form a much more accurate estimate of the competency of the heart than by merely listening over the chest-wall and palpating arteries. By the usual methods, one forms his judgment as to the force of the ventricular systole, the size of the ventricles, and the competency of the different valves. The quality of the heart tones and the accentuation, if present, of the pulmonary second sound, enable one still farther to estimate the condition of the heart, as to carrying on its present function. Study of the cardiogram, and blood pressure, helps to corroborate this judgment. Mackenzie's observations⁷ have shown us that nodal rhythm, which puts us on guard against a sudden fatal termination, may be recognized through tracings, in this way. Heart-block has been much discussed of late, and the possibility of death in an attack of syncope in this disease must ever be borne in mind.

It is impossible, of course, to recognize the exact cause of the weakness of the heart-muscle. We may suspect strongly a gumma of the heart-wall from the history and syphilis elsewhere. Fatty degeneration is a post-mortem diagnosis. We may, however, from the clinical study of the patient, recognize that the contracting power of the heart-muscle is damaged. The systolic waves are uneven,—some high, and some low,—indicating that in emergency, power of ventricle contraction may fail suddenly. While the palpating finger and auscultation of the heart has taught us these things, the graphic method has great advantages and should not be neglected.

An arterial pressure raised above the normal often enters into consideration. It must be remembered that a high blood-pressure in cases of arteriosclerosis is an evidence of compensation. There is, of course, always the danger of retinal or cerebral hemorrhage in such cases, and recourse is often had to nitrites and other drugs in the effort to lower the arterial tension. If, however, from any cause, a previous blood-pressure of 180 mm. of mercury, or more, is materially lowered,—say 10 to 20 mm.—the patient is apt to have trouble; there is evidence of lowered

nutrition, not only of stomach, bowels, and kidneys, but also the heart itself, which becomes irregular and rapid. The explanation is simple enough: With inelastic arteries and the obstruction incident to them, a certain amount of extra blood pressure is needed to drive the required blood through the circulation. If this pressure is lowered, the circulation is slowed, nutrition of the tissues suffers, the heart-muscle along with the rest, and even venous stasis may follow. A raised blood-pressure, therefore, as far as immediate condition of the patient is concerned, is not an unmixed evil.

Since we are aware that sudden death may occur from various causes, in cases which have circulatory trouble, either with or without valvular lesion, we take into account all possible factors which may lead to such an end. To be sure, not all cases of myocardial degeneration end suddenly any more than every individual with Corrigan's disease is bound for sudden death; but in every case of circulatory disease the competency of the heart to meet the strain of the patient's life should be carefully estimated.

The presence of conditions outside the heart, which may suddenly terminate life, must be noted together with the reserve power of the heart itself.

Bearing in mind these factors, we can guard a prognosis to the friends of the patient and sometimes protect him from injury.

REFERENCES

1. Heard: *American Journal of Medical Science*, XXXIX, 518.
- 2 and 3. Smithies: *Journal American Medical Association*, Vol. 53, p. 1347.
3. Krotz: *Medizinische Klinik*, Oct. 10, 1909.
4. Broadbent: "Heart Disease," 1900, p. 80.
5. Mackenzie: "Diseases of the Heart," 1908, p. 256.
6. Cabot: "A Study of Mistakes in Diagnosis," read at 1910 meeting American Medical Association.
7. Mackenzie: "Diseases of the Heart," 1908, p. 297.

DISCUSSION

Dr. Emil King (Fulda): The time-limit on both papers and discussion permits only the briefest ref-

erence to some of the most salient points of this rather large subject. As we may note from Dr. Cross' remarks, the causes of sudden death referable to circulatory disturbances are very many. In my own experience the majority of such deaths occur in the later period of life and may therefore frequently be considered an incidence of arterial degeneration. Mortality statistics appear to show that cardiac disease has very materially increased in this country during the past three decades which, if true, must be the result of our method of living. Sudden death following acute infections is by no means rare, but as this may, in a manner, be anticipated and guarded against, will not be further considered. In all probability there are very few cases of sudden death during adolescence or later where the heart alone has suffered damage. Usually, there is a degree of arterial degeneration and perhaps the cumulative effect of various poisons,—alcohol, tobacco, coffee,—of previous disease, chronic gastric disturbance, acute infections during childhood, rheumatism, etc., and at times we may also find causative factors in heredity. It is only the occasional patient whom we can advise of the possibility of a sudden end. Yet all of us may expect it. What shall we do to guard against it? Greater care and attention to detail in the examination of our patients. The family and personal history must be gone into thoroughly to estimate the probable damage done by habits, occupation, and previous illness. Where damage to the circulatory apparatus is found it will most likely be of one of two types, cardiac weakness or hypertrophy with hypertension. Either of these can be determined only by a careful examination, and here the estimation of arterial and venous pressure and the taking of cardigrams are of great assistance. Having found a degree of damage the treatment indicated will consist less of drugging than of the regulation of daily habits. Moderation all along the line—in work, in indulgences—is the rule. Medication naturally varies according to the findings. In those cases liable to sudden arrest of the heart where we find hypertension, I have felt that the iodides in small doses, aconite, and veratrum viride, administered for some time, have appeared to give relief from such symptoms as vertigo, bradycardia, and pericardial pain. In the variety where low tension is found, we naturally guard also against great exertion, but may find moderate exercise and the exhibition of strophanthus and strychnine of some benefit.

SOME OBSERVATION OF BOVINE TUBERCULOSIS IN RELATION TO HUMAN ILLS

By A. KUHLMAN, M. D.

MELROSE, MINN.

In a farmer family, a girl, 16 years of age, complained about a sore throat, catarrh of the nose, foul breath, and indigestion. On examination she had enlarged tonsils, swollen cervical glands, and a general congestion of the mucous membrane of the nose and throat. Lungs, negative; no tubercular history in the family.

Shortly afterwards her father complained of similar symptoms,—catarrh, slight cough, and indigestion. Three other children had enlarged tonsils, enlarged cervical glands, and digestive disturbances. One boy had frequently severe pains in the stomach and abdomen, most marked over the cecum and always worse at night.

The family was treated at intervals for about six months. Besides the local treatment of the nose and throat, medicine was given to relieve the indigestion, and general tonics were administered.

Six months afterwards the farmer came in for treatment, and in the course of conversation said that he killed a cow which had been discharging from the nostrils, coughed, and had slowly wasted away.

A competent veterinary surgeon was called who made a tuberculin test of all his cattle, thirty-eight in number. All, with the exception of six, gave the tuberculin test of tuberculosis. He sent all the cattle affected to the State Sanitary Board, and they were slaughtered in South St. Paul.

The farmer witnessed the slaughtering and said that some of the cattle had been practically rotten inside, and had been destroyed. Some of them were kept for commercial purposes perhaps making soap out of them.

He got his allowance from the State, and white-washed and disinfected his barn. He bought a new stock, but had every new cow tested. This was a year ago and since that time they have been practically free from all ills. The catarrh is all gone, and the boy has not had any more attacks of what I once diagnosed a slight attack of appendicitis.

The members of this family are in the habit of drinking milk freely, and they often take raw cow's-milk with their supper, especially

for the children. There is no doubt in my mind that these frequent ills—indigestion catarrh and swelling of the glands,—originated from the milk of the tubercular cows, as this milk must have been laden with tubercular germs and their toxins.

Two months ago I had a talk with the above farmer about his cattle and he stated that he had to send another tuberculous cow to South St. Paul. He bought a fine Holstein specimen, at an auction from a very prominent farmer and dairyman. A month afterwards another farmer said that he had a fine Holstein bull sick with tuberculosis. He bought the bull at the same auction as the above farmer, for sixty dollars. Perhaps he would have never gone to a veterinary surgeon had it not been for the big price he paid.

The farmer who had the auction left his farm on account of the ill health of his family. This family I had been treating at intervals for two years. The oldest boy, 18 years of age, bright and wide awake, complained about earache, general weakness, and frequent colds. On examination he had enlarged tonsils, adenoids, congested throat, and swollen cervical glands. His defective hearing was due to the congestion of the lining of the Eustachian tube. His hearing was always worse upon getting the least cold. No tubercular history in the family. The father was operated for appendicitis one and a half years ago, and two other children were operated for adenoids. It is a fact that the cows the most easily infected with tuberculosis are the ones that give the most milk, as this is, always the story of the farmer, "the best milk cow in the barn." They give milk and pus almost as long as they can stand on their feet, and the milk is freely brought to the creameries or sold to the customers without hinderance, not on account of criminal intention, but due to the ignorance of the farmer on these lines.

It is my firm opinion that there is more tuberculosis among cows than is generally believed by the average physicians, and it would be worth while in many cases to investigate the source of the milk before we "dope" our little pa-

tients with all available medicine. This is particularly true in smaller cities and communities where the cows are not tested and where sanitary rules are a dead law. Regardless of the controversy of bovine tuberculosis in relation to human tuberculosis in minor prunts by eminent men in the profession, we should not lose sight

of the fact that milk of a tubercular cow is unfit for human food, either raw or pasteurized, and that it is the cause of more childhood sickness and deaths than has been generally estimated. Milk is the best and most important food of life in infancy and childhood, but it should be pure and free of poison.

SYNOPSIS OF REMARKS MADE DURING THE DEMONSTRATION OF RADIOGRAPHS*

By W. F. BRAASCH, M. D.

ROCHESTER, MINN.

Attention was called to the fact that surgical diseases of the kidney were now being diagnosed largely by the use of x-ray and the cystoscope. Although they are of much value independently, of late the tendency has been to use the two methods combined.

First, the styletted ureteral catheter was radiographed as advanced by Kollischer and Schmidt. Of late, opaque substances, such as collargol have been injected into the ureter and pelvis and then radiographed.

Thirty such radiographs selected from several hundred made at St. Mary's Hospital, were exhibited. The plates illustrated a variety of conditions and were shown to be of value in the diagnosis of the following conditions: (1) the normal pelvis; (2) mechanical pelvic dilation; (3) inflammatory pelvic dilation; (4) deformity accompanying renal neoplasm; (5) localization of stone within the kidney; (6) differentiation of extra-renal shadows; (7) cystic kidney; (8) solitary kidney; (9) congenital anomalies of renal shape and position; (10) hydro-ureter; (11) identifying ureteral obstruction.

Attention was called to the fact that although these plates were frequently of great practical value in the diagnosis of the various conditions demonstrated, nevertheless we must add this scope and the x-ray, as well as those obtained from the case-history and physical examination. A diagnosis is to be arrived at only by combining the data to the other data derived from the cystoscopy the data derived from the various sources.

DISCUSSION

Dr. F. J. Savage (St. Paul): I wish to congratulate Dr. Braasch on the beautiful detail of these plates.

*Presented at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

The whole question is one of the value of this method. When Dr. Braasch states that it is of definite value in some cases and of uncertain value in others, he has covered the field.

Bevan of Chicago, in the *Journal of the A. M. A.*, early in 1910, says that pyelography is of such little value in the diagnosis of kidney stone that it is unnecessary to seriously consider it. His method is stereoscopic radiography for diagnosis of both kidney and ureteral stone. Kidney stones will be shown in 95 per cent of cases; and Carman of St. Louis says that in every case they should be shown.

It is certainly of definite value in some cases to be able to know the outlines of the ureter as shown by pyelography.

In the diagnosis of kidney tumor it would seem to be more a matter of curiosity than of definite value.

Dr. C. A. Donaldson (Minneapolis): I was interested in the plates as shown, and particularly in the fact that they give a definition to kidney outline. There has undoubtedly been a mistaken notion on the part of some who are newly acquainted with the x-ray of throwing too large an amount of responsibility on the showing of the x-ray plate. More than one man has asked me to make the diagnosis on the plate alone, when we require other facts in addition to this.

There is one point I would have liked to have Dr. Braasch dwell upon, and that is the proportion of the solution used in injection. A case was reported at the recent Detroit meeting where an operation, not otherwise needed, was required because they could not remove the fluid. He had used a ten per cent solution, others use a five per cent. I think this is a valuable adjunct in connection with the use of the radiograph to make diagnosis.

Dr. William J. Mayo (Rochester, Minn.): I believe that Dr. Braasch has been much too modest in his claims for pyelography. I have operated upon many of the patients of whose kidneys he has made pyelographs and here demonstrated by Dr. Braasch, and I would like to acknowledge my indebtedness to him for the accurate diagnosis which enabled me to plan my work in advance, which made the operation so much easier and added so greatly to the safety of the patient.

As Dr. Braasch has pointed out, pyelography tells

the size of the pelvis, the exact situation of the kidney with relation to the ribs, etc., and as to whether or not the kidney is infected in cases of hydronephrosis. The operation can then be made from behind, laterally or anteriorly, as space or other conditions may indicate.

In stone in the kidney, pyelography tells whether they are not conscious that they are on. So many stones are in the pelvis, in which case they are masked in the pyelograph, but if they are in the cortex, they will show outside the pelvis. In two cases, radiographs showed stones apparently in the right kidney, but pyelography demonstrated that the shadows were not in the kidney at all, but outside of this organ, and operation showed them to be gall-stones in an outlying gall-bladder and of just the right density to give shadows, which is not often the case in gall-stones.

Pyelography enables one to make a diagnosis of hydro-ureter and to determine the size and position, as well as the location, of the stricture.

In the diagnosis of certain tumors lying in the region of the kidney, the method is of the greatest differential value, showing at once the position of the kidney.

In the genito-urinary field, as in so many others, we find that direct inspection by means of cystoscopy, ureteral catheterization, and pyelography are clearing

up old obscure cases of supposed bladder disease and proving that such diseases are extremely rare, although bladder complaints are extremely common. These complaints find their source in tuberculosis, stone, stricture, tumor, and other diseases of the kidney and ureter, in posterior urethritis, prostatic disease, of the seminal vesicles, etc.

From a surgical standpoint this method of diagnosis enables the surgeon to work from the plan of the master diagnostician, in the manner in which a constructor works from the plan of the architect.

Dr. Braasch (Essayist): In regard to Dr. Donaldson's question as to the strength of the collargol solution used, we find that a five per cent solution freshly prepared will outline the pelvis distinctly.

With retained fluid in the pelvis or the ureter, we use as high as 15 or 20 per cent. We have never found the solution irritating, nor is its injection followed by deleterious results, even should it remain in the pelvis for a week or more.

In regard to the use of the injected radiograph in the localization of the stone-shadow within the kidney, we have found the method to be of practical value, not alone in localizing the shadow, but in identifying it as well.

A LEAD SHOT IN THE APPENDIX

BY ARTHUR N. COLLINS, M. D.

AUSTIN, MINN.

The writer desires to contribute the following addition to the list of cases of foreign bodies found in the appendix.

A young man of twenty-one called upon me on September 17, 1910, for consultation concerning what he regarded as "stomach trouble." His trouble began one year before, when he had complained of abdominal cramps, for the most part, in the pit of his stomach. He had had other attacks of an hour or two to a week's duration since that time. The attacks were never severe enough to detain him from his work as a machinist. His chief trouble seemed to be distress in the epigastrium with considerable gas, but with little belching. He noticed more distress when the stomach was empty and was inclined to attribute his distress to the gas, which he could not rift off from his stomach. He had suffered a very slight loss in weight. He complained of no nausea or vomiting, and claimed to have a very good appetite.

Examination revealed slight tenderness in the pit of the stomach and toward the right side,

slightly more in the right iliac region. He was told that his appendix was held in suspicion as being the seat of the trouble. To further observe the case, however, he was given a mild stomachic, and asked to report for examination a few days later. This he did, and claimed that while using the medicine he received some relief from his symptoms, but that when he left off the medicine he found his complaint as bad as ever. Examination at this time revealed no change from the condition at the previous examination. He still demurred, however, at the suggestion of appendectomy, and was given a change of prescription. He returned at the end of a week, and reported his experience as before; but he had made up his mind to undergo operation.

On October 17th, four weeks after he was first seen, he was sent to the hospital for operation, which was done under ether and in the usual manner. After the patient was off the table the appendix was opened and found to contain a small bird-shot (No. 4 or 5), located about midway the length of the organ, the total length

of the latter being three and one-half inches. Externally, the appendix showed few, if any, pathological signs sufficient to attract attention had not the history and symptoms suggested it, before the abdomen was opened, as the offending member.

Recovery was uneventful. On November 8th he is reported as entirely free from his original complaint. He eats and digests without distress, and has made a moderate gain in weight.

The writer wishes to call attention to the reflex stomach symptoms in this case.

A CASE OF TYPHOID PERFORATION SUCCESSFULLY OPERATED ON

By A. C. STRACHAUER, M. D.

MINNEAPOLIS

Patient, male, Mr. R. C., aged 25, contracted typhoid fever at Anoka during the epidemic then present there. The usual course of a severe, virulent infection was experienced for about two weeks. Due to the extremely active maniacal delirium and the occurrence of several small hemorrhages in the third week, the patient was removed to the Asbury Hospital, Minneapolis, where, in addition to the care of two special nurses, it was necessary to restrain him in a harness. The violent delirium continued for six days, the temperature going up to 104.6 degrees Fahrenheit, and the pulse 120, and three more small hemorrhages occurred.

At this time, or at the beginning of the fourth week of the typhoid fever, there was noted a sudden, abrupt drop of three degrees in the temperature and a cessation of the active delirium. I was called, and confirmed the temperature-drop, finding the patient dull, completely apathetic, in a perspiration, the forehead clammy, and the countenance pale, anxious, and pinched. Pain was, and had been, absent, or the patient too apathetic to sense or appreciate the same. The abdomen was flat, somewhat scaphoid, the liver dullness decreased, and over the right iliac region slight rigidity, increased tension, and muscle-spasm. The previous hemorrhages, though unaccompanied by a fall in the temperature, made the condition confusing. However, with the symptoms as described and with an increasing pulse and respiration, in consultation with Dr. J. W. Bell, a perforation was diagnosed and the necessity for operation agreed upon.

The patient was taken to the operating-room,

the pubes dry shaved, and a single application of the tincture of iodine was made to the whole abdomen.

Under superficial ether anesthesia the peritoneal cavity was opened by a median incision between the pubes and the umbilicus. At about eight inches from the cecum in the terminal ileum, at the base of a large ulcerated Peyer's patch, was found a small necrotic perforation. This I closed, likewise two suspicious spots at the bases of ulcerations within the last two feet of the ileum. The small bowel and the cecum were carefully examined, and, other than as described, were found intact. The typhoid Peyer's patches were numerous and readily identified. The appendix was so inflamed, red, and raw-looking, sticking up like a sore finger, that it was quickly excised after simple ligation. The abdomen was now closed, thirty-five minutes having been consumed in the operation, the patient leaving the table in a satisfactory condition.

The temperature became normal in eight days, and remained so, and the convalescence progressed as in the usual typhoid infections.

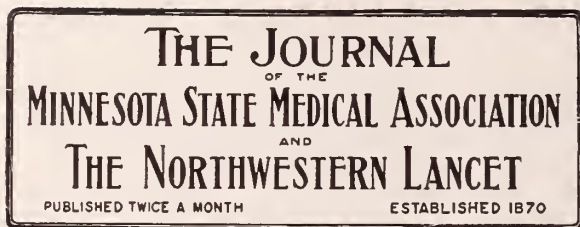
REMARKS

Nurses and attendants should be repeatedly instructed to watch for, note, and to immediately report any unusual change in the condition of a typhoid patient.

The slightest alteration warrants study and apprehension.

Typhoid perforation must be early diagnosed and immediately operated on to be of any value.

Perforation must be diagnosed and operated for, not peritonitis.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

May 15, 1911

THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

The annual meeting of the North Dakota State Medical Association was held in Fargo on May 9th and 10th. About one hundred members were present from various parts of the state.

The entire Association numbers nearly 400, with every prospect of an increase the coming year. There are between 600 and 700 medical men in the state, and an effort will be made to bring practically all of them into the Association.

President H. H. Healy, of Grand Forks, delivered an able address, and the House of Delegates, acting upon his recommendations, adopted resolutions which will be educational and protective. A medical defense feature was inaugurated, which will go into effect January 1, 1912. The defense measure was outlined by Dr. A. J. McCannel, of Minot, and was based on information from other states where the system has been so successful. An effort to stamp out professional abortionists was considered and adopted. The proceedings and transactions of the Association are to be printed in *THE JOURNAL-LANCET*.

Twenty-three papers were on the two days' program, a sufficient number for leisurely discussion.

During the recent legislature a new medical bill was passed which is a model for other states. The paper on "Medical Legislation," by Dr. H.

G. Woutat, of Grand Forks, gave a résumé of the work of the committee. The medical men of North Dakota are to be congratulated on their earnest work, which showed a determination and a system of operation that do them credit.

Medical men throughout the State were called on for financial contributions and many of them responded liberally. Dr. Woutat was in Bismarck during the legislative session and was able to keep in touch with medical and lay men in the State.

This kind of organization, which was wholly educational, shows what can be done, and what was done, to insure the new practice-act. It is evidently necessary to establish a "bureau of information" at the capitol when the legislature is in session, in order to ward off vicious legislation and to acquaint the representatives with what is essential and just. There was no active opposition by the various cults in medicine; rather a conservative co-operation of forces, each willing to give and take. An agreement was reached, concessions were made, and, in the end, all were satisfied. By this method the medical men were able to accomplish more than ever before, and in the end the medical practice act gave to the medical profession a standing which seems impregnable. The osteopaths and others had their work defined, and they can be kept within their professed limitations.

The papers presented at the meeting of the Association were up to a high standard of excellence and showed the general advancement of the profession. The next meeting will be held at Valley City. The list of officers elected is given in our news items.

The members and guests of the Association attended the theater in the evening, and a luncheon and smoker at the rooms of the Commercial Club followed.

THE VALUE OF DISCUSSION AND HOW TO INCREASE IT

That the average paper read before a medical society has little attraction is well attested by the average attendance upon medical societies, especially upon the sessions given over to the reading of papers. That this fact is well understood by our leading medical men is further attested by the time-limitations put upon papers. Such limitations do not necessarily improve papers, but they do make them more endurable, and make it not quite so hard for one to extend the

reader the compliment of attendance, and seeming attention, during the reading of his paper.

The causes for this very unfortunate condition, are not obscure, but we shall not now enumerate or discuss them. It is more important to suggest a remedy for the condition, and our remedy is not a new one. It is shorter papers and fuller discussion, but this is by no means an automatic remedy. A paper may be reduced to a single page and its discussion extended to the entire session of a society, and this without the semblance of improvement. The paper itself, short or long, must be confined strictly to the subject, and its statements must be clean-cut and specific. For instance, if the subject be "The Early Diagnosis of Tuberculosis," the meaning of *early* must be clearly understood by the writer, and the paper must be confined to *early* symptoms, not to "night sweats," afternoon temperature, bacilli-laden sputum, etc.

And what of the discussion? It may properly approve of the writer's statements and conclusions, but not in the form of flattery of the writer. It should, if necessary, point out specifically any erroneous or ambiguous statement made by the writer; and it should add something from the speaker's experience, in the form of his success or his failure with individual cases, or something new gained from his late readings. In short, it is unworthy the name discussion unless it adds to the fulness or the clearness of the writer's treatment of his subject.

How much of the discussion before our medical societies will stand this simple test? If but a small fraction of it, as we believe, what is the remedy? It is a very simple one, but it is, nevertheless, imperative that it be adopted. It is full and intelligent preparation for the discussion, and indispensable to such preparation is a knowledge of what the writer of the paper to be discussed is going to say. And let us ask, How much of the discussion in our medical societies will stand this test? Almost none of it, we fear.

The Western Surgical Association (the new name of the Western Surgical and Gynecological Association), one of the best professional associations in the country, has partially met the main difficulty of full preparation, that of knowing what the writer of a paper is going to say, by requiring that a synopsis of every paper to be read be put upon the program under the title of the paper. This is all right as far as it goes, and proves very helpful, but it is not enough. The full paper should be placed, several weeks in ad-

vance of its reading, in the hands of the men who are to discuss it. This course alone will make possible a full, intelligent, and helpful discussion of all papers.

We very much desire to see the Minnesota Association follow this plan at its next annual meeting, which comes in October. We will gladly put into type any paper sent us and will furnish the author enough proofs of it to supply all who are appointed or who may wish to discuss it. We will do this, of course, without expense to the writer. This will give the writer the benefit of a careful editing of his paper, which, in not a few instances, is very helpful.

If our offer is accepted, we should be given sufficient time, say a couple of weeks, in which to furnish the revised proofs.

VACCINES IN THE TREATMENT OF FURUNCULOSIS AND OTITIS MEDIA

The treatment of certain infective states has been greatly changed since Wright described his technic for determining the opsonic index. Blood-purifiers, such as the sulphur and molasses that our grand-mothers used on their grand-children, and the iodides and sarsaparilla that our preceptors advocated, are now being displaced by vaccines. Unfortunately, the various vaccines that are now employed cannot be obtained outside of the large cities except under special arrangement. It is also necessary for the operator to thoroughly familiarize himself with the needs of his patient before making an injection. This necessitates a careful investigation into the character of an infective process and the observance of fixed rules which govern the employment and dosage of a vaccine. The treatment of furunculosis by the hypodermatic method cannot be left in incompetent hands, but, generally speaking, a staphylococcus vaccine is indicated.

Many cures have been reported and repeated failures have not been recorded, hence this new method of treatment has not received the endorsement of medical men, except where careful observations have been made. It is highly essential that each patient should be carefully examined as to the condition of the urine, for the presence of albumin or sugar is a contra-indication for the employment of vaccines. Continued high temperature, toxemia, and other intercurrent acute affections also bar its use.

The methods of infection must be considered from the standpoint of occupations, injuries, ir-

ritants, etc., before vaccines are used. Dr. Gas-kill of Philadelphia, in the *Journal of the A. M. A.* for April 15th, advocates the treatment of uncomplicated furunculosis by the use of a sharpened cotton applicator dipped in phenol to open the boil, rather than the use of the knife. This is followed by the use of a dry-cup, then by an injection of polyvalent staphylococcic vaccine made by a reliable firm.

The application of salicylic acid ointment of from 5 to 15 per cent strength is used after the injection to allay pain. It may be, and often is, necessary to give repeated injections in obstinate cases before a cure is effected, but, ordinarily, one or two injections are sufficient.

The treatment of suppurative otitis media (scarlatinal) by bacterial vaccines by Weston and Kolmer of Philadelphia (reported in the same journal) presents a study of one hundred cases, extending over a period of nine months, and offers much food for reflection. The article should be carefully read, as it deals with a variety of bacteria found in their investigations. Each organism should be isolated, and standard vaccines made from them. No one vaccine will serve for every case. Sometimes two organisms are found, hence two vaccines are to be prepared and administered.

These men conclude that the best time, all things considered, for commencing the vaccine treatment in cases of otitis media, is from the eighth to the sixteenth day of the discharge, and that three times as many patients are cured within thirty days and permitted to go home as under the usual treatment. This means that the average residence of a patient in the hospital has been considerably decreased.

The vaccine promises most in acute cases, although cases were reported in which the discharge from the ears had continued from twelve to fourteen weeks before the vaccine treatment began.

Considering the large number of old "running" ears vaccine therapy offers a fruitful and encouraging field for exploitation. If these cases can be cut short by vaccines the number of mastoid operations will be materially diminished.

THE LIBRARY HABIT

The man who is seeking information cannot employ his time better than by spending a portion of each day in his own or a public library.

There he finds ideas that suggest the necessity

of broadening his field of observation, no matter what his vocation. A great deal of ridicule has been flung at the founder of libraries, yet no one can estimate the value to a reader of an opportunity to increase his knowledge.

Many young people, particularly day-workers, owe their advancement to the perusal of or browsing among books and periodicals. The public libraries, in large and small cities, contain a good class of literature and are supervised by educated librarians.

The habit of reading and research is so refreshing and stimulating that its cultivation should be encouraged. Particularly does this apply to medical men who feel unable to purchase books and journals. It applies equally well to those who desire to extend their investigation on special subjects.

The medical library in Washington is probably the greatest of its kind in the world. There everything of importance pertaining to medical subjects can be found.

The medical libraries of New York, Philadelphia, and Boston are stocked with literature of the highest type, and the card-index system, which is now an important equipment of every medical library, makes research easy and enjoyable.

The medical libraries of the University, Hennepin County, and Ramsey County, housed in Minneapolis and St. Paul, are growing year by year, and offer inducements to every student of medicine. It is surprising how much information can be obtained when the student wishes to read up on a subject. It requires but a short time to familiarize one's self with the advances in medicine, and the writer who is engaged in writing or compiling a paper on a particular subject will do better work after consulting various writers. In this way he sees wherein he is lame and discovers how little he really knows until he has the views of others before him. To advance an original idea requires considerable courage, but to combine one's ideas with those of others, better or less known, is to improve the whole subject.

Occasionally, one is astonished at the scarcity of the literature on what is apparently new, but by digging and delving into by-paths the amount of information found is very helpful.

The library habit, once formed, is of the great-reprints, and abstracts can easily be collected for future reference, and it is the duty of every writer and investigator to see that the nearest

library to which he has access, is supplied with his own work as well as the work of others.

A card-index is indispensable, as it facilitates work and saves time.

THE A. M. A. MEETING, AGAIN

We again urge upon our readers the necessity of making early reservations of sleeping-car berths for the trip to California. So far as we can learn, nearly all the medical men who go to the meeting will go over the Santa Fe route, and this means a great tax on this line, even though it is a great railway. The selected line from the Twin Cities is the Chicago Great Western.

THE SPECTATOR

Yesterday while discussing a point in the Sunday-school lesson one of my class of 12-year-old boys advanced the opinion that the best way to handle the problem of leprosy was to kill the lepers. "They can't get well, anyway," he said, "and it seems to me the best thing would be to put them out of their pain." Another of the boys was of the opinion that inasmuch as doctors were finding out new remedies every little while, they may find some cure for leprosy pretty soon; and if somebody found a cure, say, a week or so after somebody had killed off a lot of lepers, somebody would be sorry. Then we worked the golden rule on the problem, and decided that none of us would want to be killed while some good doctor was hunting for a cure for us, so we let the lepers live. However this might be, it seems that lepers are human beings in spite of their misfortune, and their problem cannot be solved with a gun any more than any other man's can.

* * *

If we could neglect the human element in dealing with the human race, managing mankind would be as easy as hoeing potatoes. Malthus is reputed to have had some good stiff theories regarding the regulation of the human race, but they never went into very smooth practice. The man who believed in spanking a crying baby, and was told by his wife to go and spank it, found a little person in the cradle. He had expected to see a squalling thing. Every physician who is onto his job, has found, before he has gone far with his practice, that human bodies

need human treatment. An ideal physician is something more than a body-repairer.

Every observing man is familiar with the type of pin-feather physician who starts out to handle his profession as a trade; who talks with a superior, cigarette air of his "cases"; and who would do surgery as he would carve a cadaver. Boys of this kind will do one of two things: they will rise to the level of their profession, or they will get down and run away to play. The sick-room is no place for a kid with a hatchet.

The physician, of all men, has an opportunity to influence human character. Not even the minister of the gospel has him beaten in this line. The preacher faces men with good hard heads and strong stomachs. He must knock his man down before he can convert him; his message is uninvited; but the physician is invited to the man already down. He speaks with authority to a vulnerable hearer. A sick body is an open door to the soul. Of course, the man who is swift to repent on his back may be as quick to sin on his feet; but even so, his doctor has the first whack at him after he is down. Many a decent citizen has owed his salvation from moral smash to the good stiff sermon of brimstone and fire his doctor poured into him at the bedside.

The man who puts men to rights physically and morally, will do it to vastly better effect if he is himself at rights physically and morally. The father who lays down his pipe to spank his boy for smoking; the preacher who lies about the number of converts he has made; and the physician who bats his physical frame about for the fun he gets out of it, are all light weights in uplifting the world. A man's rank, if he have a rank, should constrain him. Even if he care not for the rank, his pocket should restrain him a little. The oldest physician in our village is drunk half the time. Few people employ him because they don't know which will be his drunk day. Last week I saw my dentist smoking a cigarette on the street. I have grave doubts of the wisdom of employing him to mend my wisdom tooth.

A human body, in spite of its twists and kinks, is a noble thing. An old and very much revered authority on this point once wrote: "Know ye not that your bodies are the temples of the living God?" The care and repair of the human body is then a religious service, a service of conscience,—a calling; and a calling is a trade with a soul in it.

REPORTS OF SOCIETIES'

MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Town and Country Club, Wednesday evening, May 3d, with thirty-eight members present. After dinner a report from the Executive Committee was presented as follows:

The secretary read a communication from John M. Dreger, Jr., of Philadelphia, Pa., announcing the death on April 8, 1911, of Dr. Charles A. Oliver, of that city, an honorary member of the Academy.

On motion the chairman appointed Drs. J. L. Rothrock and A. W. Dunning, a committee, to draft resolutions to be spread upon the minutes, and to send a copy to the family of Dr. Oliver.

Dr. Cornelius Williams presented a clinical case, and described a mastoid operation which he had performed a week before. The point of interest was, that, following the operation, he had allowed the bony cavity to fill with blood and left it to become organized. He considers this an excellent method when it succeeds, and if it does not succeed, it is easy to clean it out afterward and treat it in the ordinary way.

Dr. Law reported a case of fibroid tumor in a woman aged 35 years. The tumor was symmetrical in form and larger than the gravid uterus. It completely filled the pelvis. Upon operating it was found that the tumor had its origin from the horn of the uterus, and that it was attached thereto only by a pedicle which was composed of a small bundle of blood-vessels. He reported another case of laryngotomy in a boy twelve years of age. The lad had difficult breathing for two years. He was called in the night and found the boy practically moribund. He made a quick high tracheotomy and succeeded in saving the boy's life. Two weeks later he made a low tracheotomy, inserting a tube. Following this two weeks later he did a laryngotomy. Both vocal cords were found covered with a neoplasm, which was removed. The bases were curetted, and the boy has made a good recovery. The growth was found to be a papilloma.

Dr. Cross reported a case, seen recently, in which a woman presented a tumor in the right hypochondriac region. He and others were not able to make a positive diagnosis. Later, the patient reported having passed a foreign body

per rectum, and upon examination this proved to be a fetal rib. The tumor is believed to be a tubal pregnancy, and through rupture into the rectum the rib had found its exit.

Dr. Dunsmoor reported an unusual case of rupture of the stomach, and another of tremendously enlarged prostate. The latter, upon operation, was found to be malignant, and in its removal the bladder was injured so as to render it impossible to restore its function. Thereupon he had used the entire pelvis to form a receptacle for the urine, and up to the date it seems to be doing well. The time has been too short, however, to state positively the outcome.

Dr. Benjamin described a method of performing thyroidectomy by using clamps on either side and quickly cutting out the portion desired. The advantage is an unusually slight scar and the loss of but little blood. He also reported an unusual fibroid tumor of the uterus, and one of obstruction of the bowel.

Dr. A. W. Colvin, of St. Paul, read the paper of the evening entitled "Bursæ and Exostoses of the Os Calcis." The subject was discussed by Drs. Rogers and Wright.

STEARNS-BENTON COUNTY SOCIETY

The Society met at St. Cloud, April 20th, with nineteen members and invited guests present. The following papers were read: "Prison Sanitation," by Dr. O. H. Wolner, St. Cloud; "Military Sanitation at Baudette and Demonstration of Sanitary Sink," by Dr. H. L. Lamb, Sauk Center; "Management of Contagious Diseases in the Country," by Dr. H. A. Pinault, St. Joseph; "Anterior Poliomyelitis," by Dr. H. W. Hill, St. Paul.

Officers were elected as follows: President, Dr. H. L. Lamb, Sauk Center; vice-president, Dr. C. S. Sutton, St. Cloud; secretary-treasurer, Dr. J. C. Boehm, St. Cloud; censor for one year, Dr. E. J. Lewis, Sauk Center; censor for two years, Dr. Geo. E. Sherwood, Kimball; censor for three years, Dr. J. H. Beaty, St. Cloud; delegate, Dr. W. L. Beebe, St. Cloud; alternate, Dr. C. B. Lewis, St. Cloud.

Supper was served at the Grand Central Hotel.
J. C. BOEHM, M. D., Secretary.

RED RIVER VALLEY ASSOCIATION

The regular quarterly meeting of the Society was held April 26th in the Commercial Club rooms, Crookston. There was an attendance

of thirty-nine, including visitors from neighboring societies.

The meeting was held in the evening and began with a banquet, after which the following papers were read and discussed:

The President's address, "A Doctor's Vacation," by Dr. G. A. Morley, Crookston; "The Treatment of Syphilis and the Use of '606'," by Dr. Geo. P. Crume, Minneapolis; "A Discussion of Modern Surgery," by Dr. F. A. Duns-moor, Minneapolis; "Observations of European Medicine," by Dr. J. D. Taylor, Grand Forks, N. D.

The July meeting of the Society will be held at Warren.

The officers for 1911 are as follows: President, Dr. G. A. Morley, Crookston; vice-president, O. F. Melby, Thief River Falls; secretary-treasurer, Dr. J. F. Norman, Crookston; delegate, Dr. G. S. Wattam, Warren; alternate, Dr. Theo. Bratrud, Warren; censors, Dr. H. H. Hodgson, Crookston; Dr. J. S. Kjelland, Crookston; Dr. O. H. Olson, Erskine.

The Society was entertained by the physicians of Crookston.

J. F. NORMAN, M. D., Secretary.

CAMP RELEASE DISTRICT SOCIETY

The Society met at Morton on April 27th with fifteen members present. Papers were read as follows: "Scientific Medicine versus Quackery," by Dr. F. H. Hacking, Granite Falls; "The Tonsils," by Dr. G. Elmer Strout, Winthrop; "Some Unemphasized Dangers of General Anesthesia," by Dr. G. H. Walker, Fairfax; "Post-operative Ileus," by Dr. E. O. Giere, Madison. Dr. N. A. Nelson, of Clarkfield, presented a case of "Cretinism." Dr. A. G. Chadbourne, Dr. G. R. Pease, Dr. W. A. Brand, and Dr. T. Flinn, of Redwood Falls, and Dr. L. J. Holmberg, of Canby, made application for membership. The applications were referred to the Censors to report at the next meeting. Dr. H. Kerns, of Granite Falls, was elected to membership.

After a thorough discussion it was unanimously decided to adhere to the minimum fee of five dollars for all life insurance examinations except fraternal societies. The next meeting will be held at Redwood Falls, Thursday, July 27th.

R. D. ZIMBECK, M. D., Secretary.

MISCELLANY

THE HOUSE OF REPRESENTATIVES EXONERATES DR. BRACKEN

During the legislative session of 1911 Dr. W. T. Stone, of Park Rapids, representative from the 53rd District, and a member of the Public Accounts Committee, was appointed chairman of a committee of three, the other two members being Representatives R. J. Clarke, of St. Paul, 34th District, and N. S. Hillman, of Two Harbors, 51st District, to investigate certain charges made against Dr. Bracken by Dr. Stone and others including County Attorney Kinsella of Two Harbors, concerning alleged financial extravagance, and especially neglect of duties at Two Harbors in not preventing typhoid outbreaks.

In due process of time a report purporting to come from this committee was published in the newspapers of the Twin Cities. It appeared later, however, in a statement of Mr. Clarke and Mr. Hillman, first, that no meeting of the investigating committee had ever been held; second, that they had not seen the report until it was published; third, that they refused to sign the report when submitted to them by the chairman, W. T. Stone; and, fourth, that when Dr. Stone, as representing this sub-committee, submitted the report to the committee on Public Accounts it was refused acceptance, the grounds offered being that no proper investigation had been made and that the report showed personal animosity and bias, and was not a report of the committee, but of the chairman alone.

Thereafter the Public Accounts Committee appointed another sub-committee of which W. F. Kunze, of Minneapolis, 29th District, and Knut Knutson, of Swift Falls, 56th District, were members, with J. J. Moriarty, of Belle Plaine, 26th District, as chairman.

This committee held a meeting in the offices of the State Board of Health, issuing subpoenas to Mr. Hillman, as Representative of Two Harbors, and Dr. W. T. Stone, as having made charges in his previous but unaccepted report, and Dr. Bracken was present. Dr. Stone failed to appear. The investigating committee met once or twice later and finally presented the report which follows to the House of Represen-

tatives, where it was adopted in the closing hours of the session:

COMMITTEE REPORT

To the Honorable Chairman of the Committee on Public Accounts and Expenditures:

Your committee, appointed to investigate the office of the State Board of Health, herewith submits the result and report of their investigation. This committee had no specific charge, nor none was presented to them against the Secretary of the State Board of Health, or against the State Board of Health, and our mode of procedure was to call the Secretary of the State Board of Health before our committee for a general questioning under oath as to such questions and matters and facts as were in our estimation germane to the investigation. We found that the Secretary of the State Board of Health has a very systematic manner of keeping all records and accounts, which come within the scope of his department.

Some question arose as to the excessive expenses incurred by him in his trip to Europe to attend the International Congress held in Paris sometime in July, 1910. We find that the State Board of Health, at a meeting held on April 5, 1910, unanimously agreed that said Dr. Bracken should attend the Congress in Paris, for the purpose of studying such matters as pertained to the nature of work intended to be executed by the operation of the State Board of Health. The record shows that at said meeting the sum of \$1,000 was appropriated to defray all expenses in making such trip and attending said International Congress. We find that said Dr. Bracken did attend said Congress and that he did not keep an itemized account of his expenses, but has a record of most of the items of expense, such as expenses of transportation, drayage, and express. We do not think that Dr. Bracken lavished any of the state funds in spending \$1,000 in making said trip when we consider that he traveled to Paris, remained there one week, from whence he went to Brussels, where he remained two or three days at the International Congress. From Brussels he went to London, where he remained about four weeks studying hygienic principles, and then returned home, spending the sum of \$1,009, \$9.00 of which he paid himself because it was in excess of \$1,000 allowed him by the State Board of Health.

Some question arose as to his non-feasance in office of said Secretary, because he failed to enforce certain regulations in and about the city of Two Harbors. We do not think that the State Board of Health had the power to compel the municipality of the city of Two Harbors to improve their sanitary conditions when they refused to do so. There are on file in the Secretary's office numerous letters and communications wherein the Secretary of the State Board of Health repeatedly implored said city of Two Harbors to better the conditions which were causing fevers in that city, and it seems that there was no action taken by the municipality. We do not hold Dr. Bracken responsible for the condition which prevailed at Two Harbors. Neither do we believe that he should be blamed for it, because we are satisfied that he did all in his power to use the power of his office, in so far as he could compel this municipality of Two Harbors to better the sanitary conditions at that place.

There may be some question as to whether or not a department could be created which would cover the scope of work now done by the State Board of Health, be of a better organization, and accomplish the ends for which it was created in a more satisfactory manner to the public than the present organized State Board of Health. We do not think it is our duty to make any recommendation along this line, nor are we capable of doing the same, because this is a matter which would require a very complete and extended study of the good and bad qualities of the present department.

We believe that Dr. Bracken is a very active, exact, and energetic man, and that he does all in his power to fill the position which he occupies at the present time. We have referred to the report made by the chairman of a preceding sub-committee which was appointed to make an investigation similar to the one that we have made. We find that through his whole report he has flavored the allegations therein contained by malice and prejudice against Dr. Bracken.

(Signed.) J. J. MORIARTY,
W. F. KUNZE,
K. KNUTSON.

NEWS ITEMS

Dr. J. P. Chance has moved from Royalton to International Falls.

Dr. T. B. Ramsey, of London, Canada, has located at Lignite, N. D.

Dr. G. J. Gislason, of Grand Forks, N. D., has returned from Europe.

Dr. J. O'Brien has let the contract for a \$12,000 hospital building at Wahpeton.

Dr. Alma Doswell, of Murdock, has sold his practice and will become a farmer.

Dr. W. A. Lumley, of Raymond, has moved to Minneapolis, and has offices at 3 East Lake street.

The new State Hospital for the criminal-insane at St. Peter is open for the reception of patients.

The South Dakota Railway Surgeons met in Aberdeen, S. D., last month with an attendance of seventy-five members.

The Spencer Hotel at Great Falls, Montana, has been leased by the city for hospital purposes, the present city hospital being entirely too small.

Dr. Emil Geist, of Minneapolis, and Miss Augusta Ohage, daughter of Dr. Justus Ohage, of St. Paul, were married on May 9th at St. Paul.

The State Board of Medical Examiners revoked the license of Dr. John C. Duckworth, of Duluth, last month. An appeal to the district court was taken.

Dr. Peter Bakke, of Grantsburg, Wis., has moved to Minneapolis, with offices at 5 East Lake street. Dr. Bakke is a graduate of the State University, class of '92.

The contract for building the new hospital at Albert Lea has been let to W. S. Kingsley, of Faribault. The cost of the building, complete, will not be far short of \$50,000.

Dr. N. Palmquist has located at Currie. Dr. Palmquist is a recent graduate, and has spent fifteen months as house physician of the Samaritan Hospital of Sioux City, Iowa.

A class of seventeen young women was graduated last month from the training-school of St. Mary's Hospital, Rochester. Dr. Charles H. Mayo gave the address to the graduates.

Dr. M. Seham, a 1910 graduate of the State University, who has just completed a year's internship at the City Hospital, has located for practice at 637 Sixth Ave. No., Minneapolis.

The graduate nurses of Cass County, N. D., (including Fargo) and Moorhead, organized a nurses' association on May 6th. Miss Erdman delivered an address on the value of organization.

Dr. A. W. Dunning, of St. Paul, chairman of the Playgrounds Committee of that city, is in Washington, D. C., attending the national convention of the Playgrounds Association of America.

Drs. James E. Moore and Arthur C. Strachauer, of Minneapolis, have formed a partnership for the practice of surgery, with offices at 704 Pillsbury Building, where Dr. Moore has long been located.

Dr. Marius Hansen, who has given up practice at Hendrum, will do post-graduate work in Chicago, and then go to Germany, where he will do eye and ear work. He will later settle in some city to follow his specialty.

The Regents of the State University, on May 4, voted to abolish the chairs of Homeopathic materia medica and of Therapeutics, which were retained when the department of Homeopathic medicine was given up last year.

The Hennepin County Society recently considered the matter of compelling persons to pass

a satisfactory medical examination before marriage. The Vice Commission of the city deals with the same subject in its annual report.

The Minnesota Valley Medical Association met at Mankato on May 2d, with a large attendance. Favorable action upon the union with the Southwestern Society was taken, and upon like action by the latter society at its meeting in August the two societies will unite.

The Devils Lake District Society, of North Dakota, met at Devils Lake on May 1st. Officers were elected as follows: President, Dr. C. J. McGurran, Devils Lake; vice-president, Dr. F. C. Harris, Cando; secretary and treasurer, Dr. W. H. Cuthbert, Devils Lake; delegate, Dr. A. T. Horsman, Devils Lake.

Dr. Wilfred T. Grenfell, the Labrador missionary, addressed the physicians of St. Paul and Minneapolis the first of the month. Dr. Grenfell in his medical work in Labrador has made a profound impression upon the American people, and has emphasized the value of the medical care of dependent classes, setting forth, incidentally, the vast gratuitous work of the medical profession along this line.

The North Dakota State Medical Society met at Fargo on the 9th and 10th inst., with an attendance of about one hundred. Important action was taken along a number of lines. Officers were elected as follows: President, Dr. C. E. Spicer, Litchville; vice-president, Dr. A. J. McCannel, Minot; second vice-president, Dr. M. MacGregor, Fargo; third vice-president, Dr. R. H. Beek, Lakota; secretary, Dr. H. J. Rowe, Casselton; treasurer, Dr. Frank J. King, St. Thomas; councilors,—Dr. F. R. Smyth, Bismarck; Dr. H. M. Wheeler, Grand Forks; Dr. A. Carr, Minot; delegate to the American Medical Association, Dr. V. H. Stickney, Dickinson; alternate, Dr. H. H. Healy, Grand Forks. The next meeting will be held at Valley City.

BOOKS AND INSTRUMENTS FOR SALE

Books (Homeopathic), instruments, operating-table, nine pairs of tooth forceps, red cross dry-cell battery, etc., of the late Dr. C. L. Gates, are for sale. Address Mrs. Hattie E. Gates, Hancock, Stearns Co., Minn.

PRACTICE FOR SALE

A \$4,000 practice in a Minnesota city of 6,000 people, is offered for sale, together with the seller's office furniture, for \$1,200 cash. Good schools, hospital facilities, and a prosperous people—no bad accounts. Must sell before June 1st, or offer will be withdrawn. Address O. C., care of this office.

REPORTED FROM 80 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

[illegible]

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyneuritis	Typhoid Fever	Diarrheal Diseases of Children	Cancer (?)	Puerperal Septicemia
Adrian	1,258	1,112	0													
Aitkin	1,719	1,638	0													
Akeley			0													
Appleton	1,184	1,221	1													
Belle Plaine	1,121	1,204	0													
Bovey		1,377	0													
Browns Valley	721	1,058	0													
Buffalo	1,040	1,227	0													
Caledonia	1,175	1,372	1			1										
Cass Lake	546	2,011	1													
Chisholm		7,684	1			1										
Coleraine		1,613	0													
Dawson	962	1,318	1												1	
Delano	967	1,031	1													
Farmington	733	1,024	1													
Fosston	864	1,055	0													
Frazee	1,000	1,645	0													
Glenwood	1,116	2,161	1													
Grand Rapids	1,428	2,239	4			1							1		1	
Hibbing	2,481	8,832	11			3									2	1
International Falls		1,487	*													
Jackson	1,756	1,907	3													
Janesville	1,254	1,173	0												1	
Kenyon	1,202	1,237	2			1									1	
Lake Crystal	1,215	1,038	4	1		2										
Long Prairie	1,385	1,250	0													
Madelia	1,272	1,273	1												1	
Milaca	1,204	1,102	0													
Mountain Lake	959	1,081	1													
Nashwauk		2,080	1													
North Mankato	939	1,279	1													
North St. Paul	1,110	1,404	1													
Osakis	917	1,013	1													
Park Rapids	1,313	1,850	4					1							1	
Pelican Rapids	1,033	1,019	0													
Perham	1,182	1,376	3												1	
Pine City	993	1,258	*													
Plainview	1,038	1,175	0													
Preston	1,278	1,193	3													
Princeton	1,319	1,555	*													
St. Louis Park	1,325		0													
Sandstone	1,189	1,818	3	1		1										
Sauk Rapids	1,391	1,846	1			1										
South Stillwater	1,422	1,343	0													
Springfield	1,511	1,482	1													
Spring Valley	1,770	1,817	2			1										
Wadena	1,520	1,820	2			1										
Wells	2,017	1,755	3			1										
West Minneapolis	2,250	3,022	3			2									1	
Whalan	134	1,121	1													
Wheaton	1,132	1,300	1													
White Bear Lake	1,288	1,505	0	1												
Winnebago City	1,816	2,555	3													
Zumbrota	1,119	1,138	1													
State Institutions			45	16	1	5										
Other parts of state			840	65	8	154	10	12	4		8	3	3	17	41	7
Total for state			1825	177	26	307	31	24	6		15	3	16	41	94	11

REPORTED FROM STATE INSTITUTIONS

Fergus Falls, Hospital for Insane	17	4	1	2												
Rochester, Hospital for Insane	4															
St. Peter, Hospital for Insane	4	2		1												
Anoka, Asylum																
Hastings, Asylum	3	3														
Faribault, School for Deaf																
Faribault, School for Blind	1							1								
Faribault, School for Feeble Minded	11	5		2												
Owatonna, School for Dependents																
Stillwater, State Prison	2	2														
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home	3															
Totals	45	16	1	5			1									

*No report received. Registrar not doing his duty.

179 stillbirths and premature births not included in above totals.

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The Scheidel-Western X-Ray Coil Company, of Chicago, is constantly putting out new accessories for the users of x-ray machines, and among the most important of these is a protection tube-stand, which, at a nominal cost, gives perfect protection to the x-ray operator.

They have also recently put out the Scheidel-Western Wheatstone Stereoscope, which, as its name indicates, gives a stereoscopic view of the object under examination. In this way a bullet, for instance, can be located from one exposure within the sixty-fourth part of an inch of its exact location. This can be done by no other method, and much less instantaneously. It is accomplished by the application of well-known principles, and no failures follow even though the instrument be in the hands of an inexperienced operator. Information concerning these and other late x-ray accessories will be cheerfully furnished by this company, whose address is 541-547 West Jackson Boulevard, Chicago.

THE ELMORE LINE OF AUTOS

The automobiles that have had the largest sales during the past three or four years because of their extravagant claims and vigorous pushing by high-price boomers, have found it necessary in 1911 to meet the competition of machines whose merits have been dis-

covered only after they were proven in service. One of the latter machines is the Elmore, and it has made a name by service. It has always been a dependable machine, and the machine of 1911 is better than ever, for it has kept on improving.

The five Elmore models of 1911 meet the demands and the real needs of men who want not only good-looking but good-acting machines.

The Elmore Motor Car Company, of Minneapolis (723 Third Avenue South), will furnish our readers all needed information, and give every purchaser a guarantee that is worth while, and that is the guarantee of reliability.

THE KENILWORTH SANITARIUM

Dr. Sanger Brown, of Chicago (100 State Street), is a recognized authority on nervous and mental cases, and he conducts in the Chicago suburb of Kenilworth an institution that is unsurpassed in equipment and environment by anything of like character in the West. Dr. Brown invites correspondence from any physician who may be interested in this line of work.

THE OTTAWA TENT COLONY

If the reader of this notice is in any way interested in the subject of tuberculosis and its open-air treatment he will do well to write Dr. J. W. Pettit, of Ottawa, Ill., for information about his Tent Colony. Dr. Pettit is a recognized authority, and his institution is both ethical and reliable. The location of the institution is very beautiful, and it is probably wise not to send a Northwestern patient much further south.

"TAKE A KODAK WITH YOU"

A summer vacation is hardly complete without the instantaneous notes of things seen and to be remembered, and these are gotten in the easiest and best way, by a Kodak. E. B. Meyrowitz (Inc.), the well-known optician, with Northwestern headquarters at 604 Nicollet Ave., Minneapolis, will sell you the Kodak and all accessories and show how to use them. Just call upon or write the firm, and you will be fitted out in proper manner and at the right price.

AUTOMOBILE OILS

The Van Tilburg Oil Co., of Minneapolis, have long made a study of automobile oils, and they know, as few concerns do know, how important it is to give the owners of autos a perfect oil.

Our readers will find the firm absolutely reliable, and we believe there are few men, however expert, to whom this company cannot give valuable suggestions as to the best oils to use. Write them for information and prices, and we are sure you will be pleased with the results.

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Having had a large number of calls, and an ever increasing demand for a purely medicinal wine, with proper recuperative power, Messrs. Isaac Weil & Sons, Inc., after an intelligent research, are now placing on the market their Convalescent Wine. They have absolute confidence in the quality of this wine, and recommend it to the most cautious physicians as a wine to be used as a tonic in all cases where an alcoholic tonic may be used. In case of lack of appetite, this wine can be highly recommended, if used before meals, to stimulate the keen desire for food.

They have also brought into this market a malt tonic known as the Convalescent Malt. There is an ever increasing demand for this class of tonics, which led this firm to making a careful and thorough study of all the malt tonics now being offered for sale.

After considerable time spent, they are offering the Convalescent Malt, which they consider the very finest of malt foods procurable in the United States.

They will gladly furnish samples, free of cost, to physicians, in order that they may satisfy themselves as to the quality before prescribing same to their patients.

THE AFTER-CARE OF LA GRIPPE

Among all of the infectious diseases to which human flesh is heir there seems to be none which so literally "takes the life out of one" as epidemic influenza, popularly known as La Grippe. Even though the acute febrile period of the disease may be comparatively short, from one to three or four days, the after results may persist for many weeks. The respiratory catarrhs that so frequently complicate and follow the Grippe hang on with a tight hold, in spite of all treatment directed to the respiratory tract, and the prostration which succeeds the acute infection is usually out of all proportion to the duration of the attack. Much, however, may be accomplished by careful attention to nutrition, etc., supplemented by the use of any easily tolerable, readily assimilable tonic and reconstructive such as Pepto-Mangan (Gude). This well-known and dependable blood-builder certainly aids materially to hasten convalescence, by stimulating the appetite, creating new red cells and hemoglobin and acting as a general reconstituent.

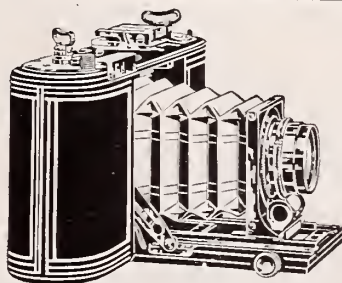
DIGITALIS

Digitalis is one of the drugs with which the profession is unable to dispense. It is the sheet anchor to which we pin our faith in many heart affections and the instrument that enables us to tide over many a critical moment in acute disease. Unfortunately one cannot always place much reliance on the galenical preparations of the drug. Digitalis leaves vary in glucosidal content in different seasons, in the same crop, even in the same field. The country practitioner has great need for drugs that are reliable in composition and certain in effect. Aid is not always forthcoming and the absolute reliability of his armamentarium is a *sine qua non*.

Digalen, manufactured by the Hoffman-La Roche Chemical Works, has filled the breach. It is a sterile solution of digitoxin amorphous (Cloetta), suitable for administration by mouth, rectum, deep intramuscular or intravenous injection. Digitoxin is the most important of the glucosides of digitalis, the amorphous form being much less toxic than the crystalline. It has no irritating effect on the mucous membrane of the stomach and is practically free from cumulative effects, when used within the physiological dosage, 1 cc. (16m.) represents 1/222 of a grain of digitoxin amorphous. The dose can therefore be "Standardized" to each individual case once the physiological action is obtained. Owing to its exactitude of dosage it can safely be employed in the cardiac diseases of children. When given internally it should be administered on an empty stomach and it should be remembered that in an acid condition of that organ the glucoside is very apt to be split up and become innocuous.

Digalen is indicated in pneumonia in the asthenic stage, when the heart needs supporting and the physician's chief anxiety is to keep the heart "going strong." Similarly in acute infectious fevers, in the tachycardia of exophthalmic goitre, loss of compensation following endocarditis, as a diuretic in dropsy, and in any affection where it is necessary to tone up the heart muscle. Digalen will prove reliable and efficient. In chronic diseases in which hypoleucocytosis is present, the action of Digalen in producing hyperleucocytosis in a marked manner is worth remembering.

The average dose is 8 to 16 m. ($\frac{1}{2}$ to 1 cc.) 3 times a day. In chronic conditions the necessity of each individual case must be considered, after the physiological effect has been once established. The intravenous injection manifests its action within a few minutes. When given by the mouth the effect is much slower and takes 24 to 36 hours to obtain full effect, and this is an important fact to remember in treating acute affections.



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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, JUNE 1, 1911

No. 11

ABNORMAL FIRST DORSAL RIB SIMULATING CERVICAL RIB

By JAKOB HVOSLEF, M. D.

MINNEAPOLIS

On October 22, 1910, I was consulted by a young man, 21 years of age, employed in a railway freight office. He complained of pain and disability of his left arm, which had commenced last summer. It was mainly the elbow that troubled him. He had a steady pain there, radiating to his forearm and hand. He also had some difficulty in extending his forearm, and complained of a tingling sensation in his fingers.

hand was white and cold. Some atrophy of the muscles of the forearm was also present.

As the examination of the arm did not satisfy me as to the cause of his disability, I instinctively ran my hand down along his neck and discovered a bony prominence slightly above the clavicle, about at the junction of its inner and middle third. A probable diagnosis of a cervical rib was made. X-ray pictures taken by Dr. C.



Fig. 1. Front view. Note the joint attachment of the abnormal rib to the second rib.



Fig. 2. Seen from the back.

The pain was almost steady, both night and day. He had also noticed that his left hand would become very cold and pale, almost white at different times. Otherwise he was in good health.

His father and one brother died of tuberculosis of the lungs.

On examination of the arm the elbow-joint was found normal, with the exception of a spasmodic contraction of the biceps muscle, preventing complete extension of the forearm. The

A. Donaldson were at first thought to have confirmed this diagnosis until a closer study of the plates revealed the interesting fact that the abnormal rib was not a cervical rib, but an abnormally developed first dorsal rib, originating as its normal mate on the other side from the first dorsal vertebra and ending with a jointed attachment to the second rib, a fact not fully understood until at the subsequent operation.

Operation November 4th, Dr. H. B. Sweetser

assisting, and Dr. C. A. Donaldson also present. Incision was made behind the posterior edge of the sternocleidomastoid muscle down to the clavicle, and continued parallel to the clavicle and outward to make more room. There was little difficulty in getting the whole rib into view. The subclavian artery, which was situated right at the tip of the rib and closely attached to it, was carefully dissected free from its surroundings and held out of the way by one of the assistants, but as the adhesion between the sheath of the artery and the end of the rib was very firm, and to avoid puncturing the artery, the safer course of dividing the rib in the middle and working in both directions was adopted, the cervical plexus being held outward by another assistant. In this way the whole rib was removed without much difficulty. The end of the rib was found articulating with the inner upper sur-

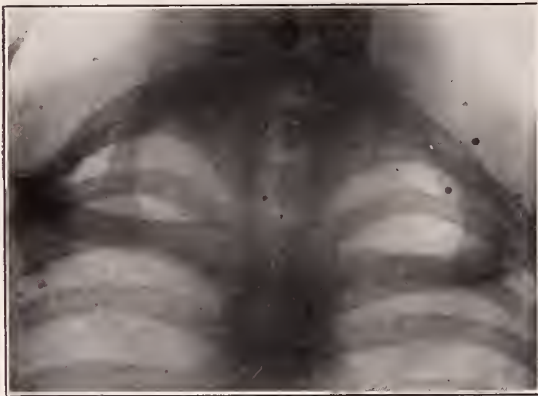


Fig. 3. Front view. Lead ring on spinous process of the seventh cervical vertebra. Shot mark the circumference of the swelling felt on the neck above the clavicle.

face of the second rib, and the cervical plexus resting on top of this joint which, with its capsule, formed the bulk of the prominence felt above the clavicle before the operation.

His recovery was uneventful with the exception of a slight paresis of the index finger and thumb, presumably from pulling on the nerve plexus in holding it aside.

The stitches were removed on the ninth day, and the wound had healed *per primam*. The pain and spasm in the arm and the tingling in the fingers left him immediately after the operation, but the vasomotor disturbance,—the coldness and paleness of his hand,—is still present, although steadily improving. This is probably due to a real neuritis, caused by long-continued pressure.

As far as I am aware, an abnormality of the

first dorsal rib like this has never been described before. Cervical ribs, on the other hand, with symptoms identical to those in my case, are not rare, although they are not recognized as often as they should be. Dr. John B. Roberts, of Philadelphia, has a most excellent paper on "The Surgical Importance of Cervical Ribs" in the *Jour. of the A. M. A.*, for October 3, 1908, from which I take the liberty to quote.

First, in order to show how little cervical ribs in man have been appreciated in times past he mentions that Coote in the *London Lancet*, in 1861, reported a successful operation for the removal of "an exostosis of the left transverse process of the seventh cervical vertebra, surrounded by blood-vessels and nerves."

Another interesting illustration of our failure "to appreciate the relations of facts," says Dr. Roberts, "is that given by H. Lewis Jones in a paper on 'Cervical Ribs and Their Relation to Atrophy of the Intrinsic Muscles of the Hand' (*Quarterly Jour. of Medicine*, January, 1908)."

In 1893 he published a short paper on "Symmetrical Atrophy Affecting the Hands in Young People," recording six instances of the disease, the cause of which he was unable to explain. In 1902 Buzzard showed that these cases should be regarded as due to a lesion of the first dorsal nerve-root.

Notwithstanding the study given the affection by these neurologists, it was not until 1904 that it was suggested by Thorburn that the palsy and atrophy of the intrinsic muscles of the hand in such patients was caused by pressure from a cervical rib. Jones then searched for and found a number of the patients previously described, and proved the existence of the unsuspected cervical rib by x-ray examination.

These historical allusions show how little appreciation surgeons and neurologists had until recently of the importance of the anomalous cervical rib as an etiologic factor in vascular and nervous lesions of the neck and upper extremity.

About the symptoms, Dr. Roberts says: "Many persons with cervical ribs suffer no discomfort from them, and their existence is unknown unless discovered by some chance clinical investigation. The symptoms are due to pressure on vessels and nerves, pressure on the subclavian artery and sometimes the vein, and irritation or inflammation of the last cervical and first dorsal nerves. These nerves enter into the composition of the brachial plexus. The rib itself or a knob-like process or exostosis on it

may give the physical signs of a tumor on inspection and palpation.

The disturbances of innervation of the hand and arm are said to be more frequent than those connected with the blood-supply. Sensory symptoms are more evident than motor, though spasms, like writer's cramp, inability to extend the elbow, and muscular atrophy from degeneration of nerve-supply, do occur.

The numbness, formication, tingling, hyperesthesia, and other evidences of nerve-irritation or inflammation are referred especially to the ulnar side of the forearm. The neuralgic pain may

be exceedingly severe, and may be intermittent or continuous. The muscular symptoms are spasm and atrophy.

A study of the symptomatology reveals the reason for physicians' making diagnoses of writer's cramp and palsy, rheumatism, neuralgia, muscular atrophy, aneurism, etc., of unknown origin. The possible existence of cervical ribs beginning to cause pressure-symptoms should ever be present in the practitioner's mind. The recollection of this possibility will lead to a correct understanding of many heretofore obscure cases. The x-ray makes the diagnosis easy.

POLIO-ENCEPHALITIS*

By EMIL KING, M.D.

FULDA, MINN.

My experience with this disease consists of 16 cases, of which 9 were in males. The first case coming to my knowledge was brought to my office on October 21, 1909, on account of a paralysis affecting one entire side, following a few days of acute illness. A second case was seen on March 9, 1910. This case had a history of an acute fever of a mild type late in the preceding January, followed by paralysis in the right leg. The other 14 cases were the product of an epidemic which began early in August, 1910, and ended in the following month.

The disease is usually most frequent during the summer months, July, August, and September, yet sporadic cases are noted at any time of year. It affects children principally, though no age is exempt, and one attack gives immunity.

That the disease is infectious admits of no doubt, though arguments, pro and con, are at hand.

The 16 cases observed by me occurred in as many families, which had a total of seventy-three children, yet in my series there was only one case to a family. This observation is probably faulty, for it omits abortive cases, which we are not as yet warranted in including in our statistics. In each instance I made searching inquiries as to probable source of infection, without result. Except the first two, the cases of our epidemic began suddenly, three cases coming to notice in as many days on farms, each from six to eight miles apart, and among people who had no ac-

quaintance with each other. At this time of year social intercourse, too, was at a minimum, schools had closed nearly two months before, and the farmers were all busy with haying and harvest, and therefore opportunity for spread of infection seemed small.

In favor of the theory of contagion is the fact that in most epidemics there are many cases in one family, that attendants and visitors are often affected, and that many cases occur in the same locality or neighborhood. Against this theory stands the fact that we have no record of any epidemics in hospitals devoted to the care of children, that a very large proportion of those exposed escape infection, and that sporadic cases often occur singly, even where no precautions or quarantine are enforced. The latter observations force the conclusions that either susceptibility is slight, that the probable nasal route of ingress makes those who have abnormalities in mouth or nose more susceptible, or that some other factor, a not-yet-known carrier other than human, plays a part.

Researches have so far failed to find the causative microorganism. According to Flexner it belongs to the filterable class and has a selective action upon the vessels of the central nervous system. Experimentally, the disease cannot be transferred by mere contact or by mouth, it being necessary to inject infectious material directly into the brain, or smear it upon the nasal mucous membrane after scarification. If we may rely on Flexner's experiments on monkeys the probable route of infection is through the nose,

*Read before the Southwestern Medical Society, January 12, 1911.

the virus reaching the brain by way of the cribriform plate.

Before considering the clinical features a short review of the known pathology may be of value. This I have abstracted largely from an article by Dr. I. Strauss, published in the August, 1910, issue of *Pediatrics*.

The inflammatory changes affect the pia mater, the vessels, both arterial and venous, and the substance of the cord and base of brain. In the pia there is a diffuse mononuclear round-cell infiltration, which follows the pial processes into the depths of the anterior fissure and along the sheaths of the central vessels, the posterior root fibers and arachnoid membrane covering the spinal ganglia. This infiltration is most extensive over the anterior surface of the cord and is of greatest intensity over the sacral and lumbar portion, decreasing in the cervical cord, medulla, pons, cerebellum, and crura cerebri, in the order named. The vessels in the central nervous system are dilated and engorged. The capillaries in the cord, medulla, and pons, are distended to thrice their normal caliber. This hyperemia is found at all levels of the cord irrespective of the intensity of the other inflammatory changes. There is, further, an infiltration of small mononuclear round cells into the adventitial lymph-spaces. The anterior horns of the cord are most affected, doubtless due to greater vascularity.

The above-mentioned changes secondarily affect the vitality of the ganglion cells, the changes in the latter varying from the mildest degree to complete degeneration and disappearance. The ganglion cells are most affected where the hyperemia and other changes are most in evidence, yet the degeneration is never in groups, which explains the absence of group-paralyses. In other organs are found the usual changes after other inflammatory infections. The lungs show areas of bronchopneumonia. The liver, spleen, and kidneys show mild degeneration. The most significant of all are an acute enlargement of the solitary follicles and Peyer's patches in the small intestine and inflammation of the mesenteric glands. These latter changes explain the common abdominal symptoms of pain and constipation. Whether they are the result of infection by that route or are due to excretion of the virus, is not yet known. The latter seems probable, as the disease has been noted in breast-fed children.

The relation of the pathological condition to the clinical picture is interesting. Paralysis, even

very extensive, may disappear very quickly, which is doubtless due to a subsidence of the inflammatory edema that has interfered with the conductivity of the nerve-fibers. This same edema may be the cause of death early in the disease. As many of the cells at any level of the cord are not at all affected the subsidence of the edema will restore function, and this also explains why group-paralyses are so rare.

The onset of this disease follows an incubation-period, of from four to ten days in most cases. The prodromal symptoms differ little from other infections. We find listlessness, loss of appetite, and headache. Many of the little patients complain of feeling very tired. Fever soon appears and usually runs a moderately high course, seldom exceeding 103°. Sore throat is a common complaint, though rarely is active congestion found in the fauces. Most patients complain also of a stiff neck, yet true opisthotonos is seldom noted. Diarrhea may precede the attack, but after fever develops constipation is the rule. The abdomen is rather hard, not tender to palpation, yet often severe cramp-like pains are present. The nervous involvement first noted is restlessness, the patient demanding constant change of position, and occasionally pains are felt in the back and legs. Active delirium and convulsions are only exceptionally noted. From the second to the fifth day after onset palsy makes its appearance. This condition is very variable as to the locality affected, the cases observed by me showing the following distribution: one leg, 8 cases; both legs, 3; one arm, 1; arm and face, 1; unilateral, 1; Landry's form of ascending, 1; and bulbar, principally of the respiratory muscles, 1. The extent of paralysis in any part may also change greatly in a short time. A limb may be immovable at one visit, and perhaps within an hour motion is restored. With the onset of palsy neuralgic pains develop, being rather spasmodic. These are aggravated by exposure or handling of the affected part. The fever usually subsides by the fourth or fifth day, and may be by crisis or lysis, as was the case in 12 patients of my series. The clinical picture, however, changes slowly, for the suffering is perhaps greater at this time than before. The palsy usually begins to clear up at this time, and we find that seldom is an entire muscle affected, some bundles retaining functional power.

In the moderately severe cases convalescence is established in two weeks, the appetite has re-

turned, the pains are less, and the patient attempts to resume former habits.

Death is, I believe, always due to respiratory failure as in the following case; female, aged 5 years, one of six children. Family history, negative. Entire family and hired man had suffered from diarrhea a week previous to the girl's illness. She was brought to me on August 10th on account of pain in her back and frequent stumbling, her parents fearing some injury (the usual story). At this time she was still able to walk with a limp. She was flushed, and complained of headache, principally at the base; the throat was bright-red, but not engorged; the abdomen was hard, yet not tender on palpation; Temperature, 103°. From this time on the palsy slowly extended up, so that by the fourth day she was unable to move any limb. The night of the 15th she was very restless, but seemed better at break of day. She asked her mother for some breakfast, which was given and relished. At 8 A. M. a change was noted. She was drowsy and cyanotic. I saw her one hour later and found that respiration had ceased while I was driving into the yard. At this time the heart still beat and continued while I prepared a hypodermic and also tried artificial respiration. These were without effect.

The diagnosis presents few difficulties after palsy appears, but, unfortunately, lasting damage may now have been done, hence we must, if possible, determine the true character of the illness in its earlier stages that we may treat actively and also institute proper measures of prevention.

While the early symptoms are similar to other infections, yet I would place especial emphasis on the pronounced lassitude, pain in the throat without inflammatory changes, stiff neck, and pains in the back and limbs. During an epidemic these symptoms would warrant me in a diagnosis of poliomyelitis. The disease has undoubtedly often been mistaken for cerebrospinal meningitis, yet is wholly different in its clinical picture. In the latter disease delirium is the rule, the face is much more flushed, reflexes are much exaggerated, the headache is more severe, and the musculature is in a state of tonic contraction. A certain means of diagnosis is by lumbar puncture, and this should be resorted to if necessary, but is obviously impracticable as a routine measure.

The treatment is wholly empirical, hence symptomatic. Absolute rest in bed from the onset

until convalescence, is necessary, even in mild cases. The intestinal tract must be thoroughly cleaned out. The fever seldom needs active measures, but I advise aconite and veratrum viride for their power to relax the peripheral circulation, and thus hope to relieve congestion and edema in the brain and cord. Warm baths too, are useful in reducing temperature and are quieting to the patient. I am partial to counter-irritation all along the spine, mustard early, and clay poultices later. For the pains coal-tar derivatives are useful, aided, if necessary, by small doses of opium. The affected limbs may be covered with cotton held by a roller-bandage, which assists in easing pain and also maintains the limb in good position. Hexamethylenamin (urotropin, formin, etc.) has been advanced as a valuable remedy from its power to charge the body fluids with formaldehyde gas. Since this paper was read Flexner and Clark report a series of interesting experiments with this drug on monkeys (*Jour. of the A. M. A.*, Feb. 25, 1911, p. 586), showing that in full doses before infection the incubation-period is materially lengthened in some animals, though not in all, and that palsy may be prevented. Their conclusions are, first, that the drug control of the virus in the body is a possibility, and, second, that the successful results have been secured by inhibiting infection and not in restraining an already established infection with the virus. We may hope therefore that this drug will prove of benefit to those exposed, but not yet ill with the disease. The after-treatment is all important, and yet is usually much neglected, as is shown by the deplorable results so often reported in the literature. Tonics, electricity, massage, and orthopedic appliances all have their proper place.

The physician should not discharge the case as soon as convalescence is established, but should carefully explain the necessity for long supervision. Failure in this on our part results in greater deformity and the frequent falling of these cases into the hands of irregular practitioners to the reproach of our profession.

What steps shall we take to prevent the spread of infection? Since we do not know the exact manner of its spread, nor can we trace healthy carriers, we must employ the usual measures, such as isolation, quarantine, and the destruction of all discharges. Of the latter, those from mouth and nose appear most important. If Flexner's work proves correct the virus gains entrance principally through the nose, hence spray-

ing with H_2O_2 is to be recommended as a prophylactic, and as it is also very probable that the virus is excreted by the same organ, and for months after the acute illness, the spraying and destruction of these discharges must be carried out for a long time.

The mortality of this disease is from 5 to 15 per cent of all cases showing palsy, my series having two deaths, or 12.5 per cent. The sad part in this disease is the fact that nearly 80 per cent of those affected will have some defect remaining. In many the defect will be so slight

as to escape ordinary notice, but others will ever remain in a crippled state.

In this State this disease has shown a steady increase. Previous to 1910 its mortality was included under cerebrospinal meningitis, and we find the number of deaths as follows: 1907, 98; 1908, 130; 1909, 232, and last year 189, reported as poliomyelitis. The actual mortality is greater for many cases were doubtless reported as from other causes. Since there has been a steady increase and the end-results are so serious, we should give this disease our closest attention.

APPENDICITIS WITH COMPLICATIONS

CLINICAL REPORT FROM HILL CREST SURGICAL HOSPITAL

By J. WARREN LITTLE, M.D.

MINNEAPOLIS

Archie K., aged 7 years, weighs 68 pounds, has never had any children's disease; always well. Father and mother alive and well.

On October 10, 1910, the patient was taken suddenly ill in the early morning with vomiting and pain in the abdomen; was in bed October 10th, 11th, and 12th; got up October 13th. Was not attended by a physician at first because the parents did not think the child very ill. He was up all day October 13th, but the pain in the abdomen started again about midnight and lasted until he was brought to Hill Crest Hospital on October 14th. He vomited some that morning and had pain in the abdomen; was very much distended; face blue and pinched; was operated on at 9 A. M. Temperature, 102° ; pulse, 156; respiration, 120. Small amount of ether was given. McBurney's incision was made, and a large amount of pus liberated. Second incision was made in the median line, through which a drainage-tube was inserted and passed into the pelvis. Through McBurney's incision two drainage-tubes were inserted, one along the ascending colon and the other into the right iliac fossa. No attempt was made at this time to remove the appendix as the boy's condition did not warrant it. He was placed in the Fowler position, and the drop-method enteroclysis of normal salt solution started. At 2 P. M. following the operation the rectal temperature was 101.9° ; pulse, 140; respiration, 40.

The chest was examined several times on account of rapid respiration, but nothing was discovered until the ninth day after the operation; at that time the chest became flat. Rectal tem-

perature was 103.8° ; pulse, 158; respiration, 52. The boy seemed to be in extreme danger. Enough ether was given to produce primary anesthesia, and an incision was made between the fifth and sixth ribs in the midaxillary line and a double drainage-tube inserted; large amount of pus liberated.

At 2 A. M., October 26th, the rectal temperature was 105.5° ; pulse, 160; respiration, 66. Pulse, temperature and respiration never reached normal at any time. The drainage from both abdomen and chest was free, but there was some pain in the chest-wall, caused, I think, by pressure of the rubber tubes between the ribs.

On November 14th the patient had improved somewhat, and a more thorough drainage of the chest was advisable, so I removed a portion of the eighth rib in the axillary line, freed the lung where it had become adherent to the chest-wall, and inserted a double drainage-tube. This was done at 9 A. M. At 2 P. M., following the operation, the rectal temperature was 104.6° ; pulse, 180; respiration, 90.

On November 18th the pleural cavity was injected with one-per-cent formalin in glycerine. This was repeated on November 14th and did not produce very great pain, but had no apparent effect upon the discharge of pus. On November 21st, the chest-cavity was injected with iodine solution, the strength of which I cannot exactly tell, but was about the color of port wine. This had a remarkably beneficial effect in lessening the discharge of pus. The abdominal tubes were removed, but the drainage-tubes in the pleural cavity were not removed until about the second

week in December. The boy continued to improve and was discharged from the hospital on December 23d, seventy days after admission. He was still very weak, and his temperature registered on the day he was sent home 101° . During the seventy days at the hospital his temperature did not remain normal a single day, and touched normal only six times. On February 21st, 1911, in the early morning, he was taken with an acute attack of appendicitis and was at once sent to the hospital. His temperature when he entered the hospital was 101° ; pulse, 104; and respiration, 34. He had a large post-operative hernia where the drainage tubes had been inserted through McBurney's incision.

A large acutely inflamed appendix was removed, a scar on the end of which showed where a previous rupture had taken place.

The post-operative hernia was repaired by overlapping muscles and fascia, as in an umbilical

hernia. Chronic catgut was here used. The overlapping was made from above downward, instead of from side to side, as there seemed to be less resistance, and the flaps fitted better when put together in that way. A primary union of the muscles and fascia was secured.

The poorly nourished skin that had covered the hernia sloughed. This was removed, and by undermining the skin there was no difficulty in drawing it together with silk-worm sutures. This was done without an anesthetic, and a fine union secured.

The little patient was discharged on March 14th, twenty-one days after his last admission. He had gained a good deal of flesh and was perfectly well in every way.

This case teaches how perseverance, good nursing, and care will secure results in cases that are apparently hopeless.

THE ANATOMICAL AND CLINICAL RELATIONSHIP OF THE NASAL ACCESSORY SINUSES TO DISEASES OF THE EYE*

By WILLIAM R. MURRAY, Ph.B., M.D.

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MINNEAPOLIS

When we consider the anatomical relationship of the orbital cavity to surrounding structures and especially to the adjacent nasal sinuses, separated from them, as it is, by extremely thin and delicate bony plates which present avenues of infection, it seems rather surprising that the orbital cavity and its contents are not more frequently involved by direct extension of the inflammatory process from adjacent cavities, especially when we consider the great frequency with which these cavities are the seat of a purulent inflammatory process. Nevertheless, it is only within a comparatively few years that we have recognized, in a clinical way, this close relationship which exists between the eye and adjoining nasal structures and especially as regards involvement of the posterior ocular structures. The great advances that have been made, both in methods of diagnosis and treatment, in our knowledge of the sinuses adjacent to the nasal passages have done much to clear up many

hitherto obscure, or mistaken, etiological factors in ocular disease, and the results of such observations continue to be reported.

In regard to the anatomy of these nasal sinuses, I will refer only to those anatomical conditions which are sometimes present and which show the great variability in structure of these cavities and which are of great importance in a consideration of the clinical relationship of the accessory sinuses to the orbit.

Reported observations on large numbers of skulls have shown the presence of openings through the thin bony plates of the orbit into surrounding sinuses. These openings, or dehiscences, in the sinus walls may be a congenital condition, or they may be the result of pathological processes, and they are of very great importance, for, in the presence of such an opening, the mucous membrane of the sinus may come into direct contact with the periosteum of the orbit or with the sheath of the optic nerve. The mucous membrane of the frontal sinus may come in contact with the lining of the orbit through

*Read at the annual meeting of the South Dakota State Medical Association, Hot Springs, S. D., September 28, 1910.

the floor of the frontal sinus; the mucous membrane of the antrum may lie in apposition with the orbital cavity through the roof of the antrum; an opening through the ethmoid plate may bring the mucous membrane of the ethmoid cells in contact with the orbit; and an opening in the bony wall of the optic canal may bring the mucous membrane of the posterior ethmoid cells or the sphenoidal cavity in touch with the sheath of the optic nerve.

Zukerkandl has reported four cases in which he found openings present between the maxillary sinus and the orbit, and Merlin has described two such cases. In one case, to which Onodi¹ refers, there were five openings through the ethmoidal plate communicating with the orbit. Gallmaerts² found openings in the wall of the optic canal twice in 200 cases; Holmes³ found such openings twice in 50 cases; Onodi found them once in 300 cases. Merlin has observed openings through the superior wall of the orbit by which the orbital cavity communicated with the frontal sinus. Zukerkandl, Merlin, and Onodi have observed openings through the cribriform plate which opened into the orbital wall of the frontal sinus.

It is not unusual for a frontal sinus to be so well developed that the floor of the sinus extends back over almost the entire upper wall of the orbit. The anterior ethmoid cells occasionally extend laterally over the roof of the orbit or laterally beneath the floor of the orbit, thus favoring infection from these cells.

Killian has shown that the veins of the accessory sinuses intercommunicate and also communicate with adjacent cavities, including the orbit. Onodi¹ has shown how involvement of the ethmoid veins in the semicanalis ethmoidalis may cause thrombophlebitis of the orbital veins, and he has also shown how large bone cells in the superior turbinate may, through pathological processes, become distended and involve the optic nerve.

Peculiarities in structure of the posterior ethmoid and sphenoid cavities, as shown by a number of observers, will explain the occasional involvement of the optic nerve, resulting in optic neuritis or retrobulbar neuritis accompanied by partial or complete blindness. In this connection the work of Francis⁴ is of interest. He examined 60 skulls and found that the thinnest part of the sphenoid wall is in touch with the optic nerve where it winds around the side of the sinus or where it joins with its fellow to form

the optic commissure. In one-third of the specimens he found this bony wall to be $\frac{1}{4}$ m.m. (1-100 in.) in thickness, and in 30 per cent it was only $\frac{1}{2}$ m.m. in thickness. In 17 per cent there were diverticula from the sinus which approached or invaded the orbital wall, and in many of the specimens the optic canal presented itself as a rounded ridge in the sinus wall. Loeb⁵, from a study of 15 skulls to determine the relation of the optic nerve to the accessory cavities of the nose, has recorded the measurements found and has shown the great variation in size of these cavities and their relationship to surrounding structures. He found the optic chiasm, usually, to be in relation with one or both sphenoid sinuses, and in no instance was it in relation with the ethmoid. In more than half of the heads he found it to be posterior to the sphenoid. He divides the optic nerve into a sinus portion and a free portion and finds the sinus portion to be usually the larger. In 5 cases one sphenoid cavity was in relation with both optic nerves, an anatomical condition which seems to establish the possibility of a double optic neuritis being due to involvement of a single sphenoid sinus. This finding would seem to be at variance with the opinion of Mendel and de Lapersonne, who regard a double optic neuritis to be of intracranial origin. Loeb also adds that "the posterior ethmoid cells, also frequently affected, have very little influence on the optic nerve on account of the meagerness of their relation, viz., the postero-external angle at the roof of the cell. When the cell replaces the sphenoid and the optic nerve passes along the external wall, then the posterior ethmoid becomes the most potent factor of all, for the nerve is closer to the mass of pus and for a greater distance than under any other circumstances, even though the nasal opening may be in the dependent portion of one part of the cell."

Onodi¹ has established and classified 38 variations in the relationship of the optic nerve to the posterior ethmoid cell and the sphenoid sinus, and has shown that in visual disturbances and blindness, caused by disease of the sinuses, the following anatomical conditions are important factors: the bony wall of the optic canal and of the optic sulcus; dehiscences in the walls of the sinuses and the optic canal; the semicanalis ethmoidalis; the partition between the individual sinuses; the turbinate bone cells. In 15 cases he found the optic canal communicating freely for from 6 to 10 m.m. with the posterior ethmoid

cell or the sphenoid sinus. He also found that in some cases the sphenoid may form a part of the superior and inner wall of the orbit, and that direct involvement of the contents of the orbit may result from extension of infection through the orbital walls or by means of the blood-vessels.

Clinically, these variations in location and extent of the accessory sinuses and the many avenues of infection, physiological and pathological, are of very great importance. It is this great variation in anatomical structure that gives rise to such a multiplicity of symptoms in an ocular involvement secondary to a sinusitis, and involvement of a nasal accessory sinus will frequently produce eye-symptoms of a most varying character. The dependence of certain superficial lesions of the eye and its appendages upon nasal lesions has long been recognized. Certain forms of chronic conjunctivitis and superficial lesions of the cornea, dacryocystitis, and orbital abscess are frequently due to nasal involvement, infection extending directly from the adjacent sinuses or nasal passages or by means of the venous circulation between the nasal cavities and orbit. Probably the most frequent eye-complications of a sinusitis are various pains and headaches in which there is no eye-lesion, but which are usually referred to the eyes and are increased by use of the eyes for near work. Posey⁶ has called attention to this class of cases and also to numerous cases of muscular insufficiency caused by sinusitis, and states that many of these cases will give a history of a former attack of grip attended by severe head pains. Brawley⁷ also calls attention to this class of cases, in which the symptoms are purely ocular, and the patient is not aware that he has any nasal or sinus disease. Moreover, it is not necessary that pus be present in the sinuses, or that there be an actual involvement of the sinuses, to give rise to such eye-symptoms. The closure of the sinus openings, due to obstructive lesions within the nostrils, and thus interfering with the normal exchange of air within the sinuses and proper drainage, is frequently responsible for these reflex eye-symptoms. An enlarged middle turbinate bone or a high deviation of the bony septum, by causing pressure and venous stasis, may be the etiological factor, or an actual accumulation of pus may be present in a sinus without showing the presence of pus within the nostril and without any history of nasal or sinus disease, and the presence of pus in the cavity

can be determined only after the most careful and thorough examination. Phlyctenular conjunctivitis and keratitis are usually secondary to nasopharyngeal involvement. Transitory or recurring edema of the eyelids may be due to involvement from the ethmoid cells. Involvement of the anterior group of nasal sinuses, the maxillary antrum, anterior ethmoidal cells, and frontal sinus, are more likely to give rise to the anterior ocular lesions, such as conjunctivitis, dacryocystitis, orbital abscess, superficial corneal lesions, edema of the lids, periostitis, necrosis, etc., while diseases of the posterior group of sinuses, the posterior ethmoid and sphenoid, are more frequently responsible for the deeper ocular lesions, such ocular involvement being due to direct pressure on the optic nerve or by interference with the venous circulation of the orbit. Birch-Hirschfeld⁸, in a series of 409 cases of orbital inflammation due to sinus disease, found corneal ulceration 18 times; panophthalmitis 8 times; glaucoma twice; making 66 eyes blind as a result of sinus disease. Cramer⁹ reports a case of acute ethmoiditis associated with empyema of the antrum and frontal sinus, resulting in orbital abscess and exophthalmos, the eye becoming infected and lost. Johnston¹⁰ reports a case of recurring monocular exophthalmos which became permanent and had remained so for three years. The anterior end of the middle turbinate was removed, with liberation of pus, and six weeks later the eye was normal. Oppenheim¹¹ reports a case of exophthalmos that had existed for five years. The x-ray showed frontal, ethmoidal, and sphenoidal abscess. The exophthalmos disappeared after radical operation on the sinuses. Ziem has observed cases of iritis that improved only after nasal treatment. Mason¹² refers to two cases of uveitis relieved by removal of the middle turbinate. Thompson¹³ refers to a case of paralysis of the third nerve, causing complete ptosis, dilated pupil, divergent strabismus, with choked disk, due to suppuration in the ethmoid cells. Sluder¹⁴ reports a case of blindness due to the presence of pus in the ethmoid cells; evacuation of pus was followed by restoration of vision to normal; no fundus lesions were present.

Murphy¹⁵ observed a case of blindness with atrophy of the optic nerve and exophthalmos and paralysis of the external rectus muscle due to chronic empyema of the posterior ethmoid and sphenoid sinuses.

Gradle¹⁶ reports four cases of choroidal dis-

ease with retinitis which were associated with sinus disease of the same side.

In three cases of maxillary sinus diseases Kuhnt found an embolus of the central vein of the retina.

In considering the relationship of the posterior ethmoid and sphenoid sinuses to diseases of the eye, we find, naturally, that the most frequent complications are involvement of the posterior structures of the eye and orbit, especially the optic nerve, or such pressure symptoms as are caused by venous and capillary stasis, and when we recognize the many atypical forms that these posterior sinuses may present with their direct relationship to the optic nerve it would seem that such accessory nasal sinuses must be a very frequent cause of such ocular conditions as unilateral optic neuritis and unilateral retrobulbar neuritis. It must be recognized, however, that an atypical sphenoid sinus may be in relationship with both optic nerves as shown by Loeb in five cases. Fish¹⁷ found nasal accessory-sinus disease present 26 times in a series of 36 cases of unilateral optic neuritis. Ballenger¹⁸ refers to three cases of optic neuritis, with partial or complete blindness, that came under his observation. Operation on the sinuses was followed by return of vision to normal. Knapp¹⁹ reports a case of optic neuroretinitis. Vision improved from 20-70 to normal after operation upon the middle turbinate and posterior ethmoid cells. Paunz²⁰ reports six cases of inflammation of the optic nerve due to posterior ethmoidal and sphenoidal involvement. Cavernous sinus thrombosis may be due to infection from the sinuses, the thrombus extending from an ethmoid vein into the ophthalmic vein and cavernous sinus or by direct extension through the walls of the sphenoid.

When such eye-lesions, as mentioned above, are present and are due to an intranasal or sinus involvement, relief usually promptly follows the removal of pressure caused by such intranasal or sinus disease, and such relief is usually permanent, provided treatment or operative measures are sufficiently thorough.

The following cases will illustrate some of the ocular complications mentioned:

Patient, male, aged 35, occupation, farmer, was referred to me for operation for a unilateral chronic empyema of the frontal, ethmoidal, and maxillary sinuses. He also complained of partial loss of vision in the eye on the same side as

the affected sinuses, and stated that his sight had been bad in that eye for the past year.

Examination of the eyes showed vision of 20-100 in the right eye; no pain or tenderness on palpation of the eyeball; extra- and intra-ocular muscles normal; ophthalmoscopic examination showed optic neuritis, retinal veins congested, and edges of disk blurred. Visual field contracted for white and colors, with a small central relative scotoma; left eye, normal. Ten days after operation on the frontal sinus and ethmoid cells vision was normal with normal visual field.

In this case there had been partial loss of vision, as shown by the history of the case, for about one year. The impaired vision was probably due to the pressure of retained secretions in the sinuses upon the optic nerve. The return of vision to normal in ten days after operation shows the rapidity with which these cases recover.

Patient, male, aged 38, occupation, farmer, had a chronic unilateral involvement of the right frontal, ethmoidal, and maxillary sinuses. Vision in the corresponding eye was 20-40; no fundus change as shown by ophthalmoscopic examination; examination of visual field showed field for white normal, and field for red considerably contracted with a small central scotoma for red.

Diagnosis: retrobulbar neuritis secondary to chronic sinusitis.

A radical operation on the frontal and ethmoidal sinuses was followed by an enlargement of the color-field to normal and improvement in the vision to 20-30, which was further increased to 20-20 by suitable lenses. In this case diminished vision and contracted field for colors was due to involvement of the optic nerve by retained secretion in the posterior ethmoid cells.

Patient, female, aged 47, came to me complaining of severe pain in and back of the right eye. Pain worse at night and aggravated by use of the eyes. Had several similar attacks during the previous two years. No pain or discomfort in the left eye. Examination of the right eye showed pupil moderately contracted and pupil reaction more sluggish than in left eye; tension, normal; retinal arteries, contracted, and retinal veins much engorged; intra-ocular structures otherwise normal; visual field contracted for both white and red, especially on the nasal side of the fundus; left eye, normal.

Examination of the nose showed marked nasal obstruction on the right side due to very large middle and inferior turbinate bodies; no pus

present in the nostril; no involvement of the sinuses as shown by transillumination and probing. Patient was advised that the nasal obstruction might be responsible for the eye-involvement. Removal of the anterior portion of the middle turbinate was followed by relief from pain in the eye and enlargement of the visual field and disappearance of congestion of the retinal veins.

In this case the result of operation showed that the eye-involvement had been due to engorgement of the orbital veins from intranasal pressure caused by an hypertrophied middle turbinate.

Patient, Mrs. N., aged 30, came to me in September, 1906, complaining of frontal headaches, most marked on the right side and aggravated by use of the eyes for near work. Examination of the eyes showed a compound hyperopic astigmatism of moderate degree. Lenses were prescribed for constant use. Two years later the patient returned and stated that her glasses had given her some relief, but had not been satisfactory, and she had not been able to use her eyes for near work without headache and pain in the eyes. Re-examination of the eyes showed

some change in amount and axis of the astigmatism. New lenses were prescribed and were worn for one year when the patient returned with her former complaint of headaches and pain in and back of the eyes. Examination of the nose showed a chronic anterior and posterior ethmoiditis on the right side and enlarged middle turbinate on the left side. Removal of the anterior ethmoidal cells and curetting of the posterior ethmoid cells on the right side and reduction of the middle turbinate on the left side, were followed by relief of all eye symptoms and headache, and she has been using her eyes for close work without discomfort.

REFERENCES

1. Optic Nerve and Accessory Sinuses of the Nose, 1910.
2. *Annal d'Ocul.*, 1900.
3. *Arch. Ophthalm.*, 1896.
4. *Ophthalm. Record*, Dec., 1908.
5. *Annals Otol. Rhin. and Laryng.*, June, 1909.
6. *Trans. Am. Acad. Ophthalm. and Oto-Laryng.*, 1903.
7. *Trans. Sect. Ophthalm., A. M. A.*, 1906.
8. *Klinisch. Monatsbl. f. Augenheilkunde*, xvi, p. 1.
9. *Klinisch. Monatsbl. f. Augenheilkunde*, xvi, p. 69.
10. *Ophthalm. Record*, July, 1908.
11. *Klinisch. Beilage*, Heft. p. 353.
12. *Iowa Med. Jour.*, Dec. 15, 1907.
13. *Laryngoscope*, xvii, 708.
14. *Laryngoscope*, xvii, 883.
15. *Laryngoscope*, xvii, 823.
16. *Ophthalmology*, v, 400.
17. *British Med. Jour.*, Nov. 2, 1907.
18. *Diseases Nose, Throat and Ear*, 1909.
19. *Arch. Ophthalm.*, xxxvii, No. 1.
20. *Arch. f. Augenheilkunde*, lxi, 369.

HAY FEVER: ITS NAME AND NATURE*

By W. N. PORTEOUS, M. D.

MINNEAPOLIS

Hay fever, catarrhus æstivus, Bostock's catarrh, asthmé d'été, Fruhsommer catarrh, and lastly, at the suggestion of one of our University teachers, pollenitis, are among the many names, in many tongues, by which this disease has been called.

Hay fever has been defined as a catarrhal affection of the mucous membrane of the eyes, nose, mouth, pharynx, larynx, and bronchi, accompanied by dyspnea, supposedly induced by the action of the pollen of various plants, chiefly of the grammineæ, prevalent during the hay season, and varying in severity according to atmospheric conditions.

Hay fever exists throughout Europe, but it is much more common in England than on the Continent. In ratio of the population, it is more common in England than in America.

This affection was first noticed by Bostock,

who suffered personally, although Botallus, Van Helmot, Bunningerus, and others had also made observations upon this peculiar form of catarrh. Bostock was the first to recognize its periodicity and to give an excellent description of the disease. He did not approve of the term *hay fever*, which had come into use even in his day, under the belief that moist heat, sunshine, and dust were prominent factors in causing the nerve-storms. Gordon made the deduction, from a careful study of his cases, that the attacks were due to emanations from flowering grasses, more particularly the anthoxanthum odoratum, or sweet-smelling grasses. In 1854 Phoebus collected the histories of over 150 cases, the study of which convinced him that excessive heat and sunlight were the active causes. Helmholtz detailed to Brinz, by letter, his own sufferings from the disease and advanced the theory that it was caused by vegetable spores which he had discovered in the nasal secretions. Blackley,

*Read before the Minnesota Academy of Medicine, St. Paul, April, 1911.

by an extended series of experiments, completely disproved this statement. Wyman, Beard, and Marsh made most elaborate and careful investigations into the cause or causes of hay fever, and called special attention to the ambrosia artemisiaefolia, or common ragweed, which is so indigenous to America. Daly, in 1882, directed his observations to the nose itself, and was the first to suggest that a diseased condition of this chamber might be the cause or, at least, an important factor, in the production and exacerbation of the disease. Beard made a new departure from his previous investigations, and, in an analysis of 200 cases, he concluded that the disease was essentially neurotic.

These researches indicate four distinct causes or conditions necessary to the production of an attack: first, the presence of pollen; second, a neurotic habit; third, a diseased condition of the respiratory mucosa, particularly of the nasopharynx; fourth, but, by no means least, excessive heat and sunshine.

The theory that pollen is the chief cause of hay fever is very old, but its advocates have failed to make any satisfactory distinction between the possible exciting cause of the attack and the peculiar habit which renders its victims susceptible to its influence. Granting that it is completely established that the responsibility rests upon the pollen, or, probably, many pollens, we have gone no further than to recognize an exciting cause, without attaining to any knowledge of the condition which permits the pollen to initiate or exacerbate an attack. Blackley, from 1866 to 1878, made a series of elaborate experiments. He himself generally suffered from the first of June until the first of August; and his tables disclose the approximate number of grains of pollen to the square inch of exposure, the number of grains increasing very rapidly from May 30th, when there were 25 grains, until June 28th, when over 300 grains were found upon the glass register. From that time on the number of grains decreased, and the condition of the victim materially improved. This experiment was, however, confined to Blackley's personal condition, and it recalls the equation of the swallow and the summer. After all, it shows nothing more than that the prevalence of the pollen and the severity of the attacks were in direct ratio to each other. Just why or how the germinal part of flowering plants should exercise such an influence upon the neurovascular mechanism of the nasal, pharyngeal, or laryngeal

mucosa has never been satisfactorily explained.

From the study of a large collection of cases Beard came to the conclusion that a prevalent family type, in neurotic quality,—a nerve-storm type, if we may so call it,—exhibiting such disorders as chorea, epilepsy, asthma, etc., was to be recognized among hay-fever habitués. No one, indeed, who has made himself familiar with the course and characteristics of this malady can escape from the strong intimation of neurotic habit which they present.

The important feature in all these types of nerve-storm tendency is the local point of the neurosis, and in hay fever it is quite clearly to be found in a marked instability of the vasomotor control of the arterioles in the upper respiratory field. So extreme is the dilation of these vessels, and so great the consequent engorgement of the venous outlets, and particularly of the large venous sinuses of the practically erectile tissue of the nose, as to suggest a hyper-irritability of the vasodilator mechanism, rather than a primary paresis of the vasoconstrictor, although it is possible that both of these opposing factors may be involved. The more exclusive view is encouraged by the readier effects of sedative, rather of directly constrictive, measures. This also explains the *modus operandi* of such irritants as the pollens acting upon so unstable a local nervous mechanism. It accounts for the absence of hay fever in cases of atrophic rhinitis or of specific disease involving atrophic changes in the mucosa, whereby the possibilities of vasodilation are structurally impaired and often entirely destroyed. No case of this disorder has ever been recorded, to the writer's knowledge, and certainly none has occurred within the range of his observation.

The excessive output of mucoid secretion from the glandular tissue of the nares, which normally is great, but is estimated not to exceed twelve to sixteen ounces a day, an increase which is characteristic of every hay fever attack, can be rationally explained only by the occurrence of so excessive a vasodilation, the natural concomitant of secretory flow. Also in consequence of the engorgement of the capillary vessels, a lymph-edema obtains, the pressive influence of which upon nerve-endings accounts for the phenomena of heat and pain which are exhibited at the height of an attack.

The cyclical quality of the paroxysms strongly suggests, too, the vasodilator element, since the vasodilator mechanism in all tissues, so endowed,

is ready of exhaustion and thus self-limits the endurance of an individual attack. As a rule, it is found that the severity is in direct ratio to the brevity of a paroxysm. Its maximal effects, by way of capillary and venous congestion and lymph-edema, are, of course, slow in subsidence.

Granted the neurotic quality of the disease and granted the vasodilator focus of the nerve-disorder, no real progress has been made thereby in determining why the mucosa of the upper respiratory tract should be the seat of its expression, or why it should be of seasonal or habitual appearance. It is these two difficulties which have invited, and which account for the persistence of, the theories of pollen-causation, and yet those theories do not really answer either of these puzzling and aggravating questions.

The hay-fever habit varies in its exhibition from June to early September, and dates of its appearance are as approximately fixed in one part of the period as another. The pollen content of the atmosphere varies alike in kind and concentration during all these summer months, and it is impossible to believe that a normal nasal mucosa will await, undisturbed, the critical increase of the number of grains of pollen, per square inch of exposure, before it breaks out into a state of riot. It is, nevertheless, quite natural, in view of the locale of the disease, that we should look for such an atmospheric cause.

We may admit, in view of the closely fixed dates of occurrence and upon the strength of the causative influence of the artificial rose of John H. Mackenzie and of the hay-fever picture of Morel McKenzie, that a psychic, or suggestive, element enters in. Even so, back of the climacteric of the pollen or of the mental calendar must lie a susceptible soil, induced by some direct influence, in the respiratory tract itself. That the disease is more readily developed among the better educated and more affluent classes of the community simply emphasizes its neurotic quality.

Before offering some further suggestion of the cause, or causes, of the condition, and basing thereon some practical suggestions of relief, let us emphasize the peculiar characteristics of this susceptible soil.

There is no exposed surface of the human body in which vascularity is so great, in which the extreme of vasodilation is so manifest, in which a consequent erectility of tissue is induced, excepting the mucosa of the vaginal tract, as in the nasal chambers.

There is no part of the nervous system which is so susceptible to external influences and so prone to the development of habit in its responses, as is the vasomotor mechanism.

These two sets of phenomena are believed to lie at the foundation of the causative relations of hay fever.

Let me now cite, briefly, the history of four or five cases which seem to forge for us some essential links in the chain of cause and effect.

CASE 1.—M. A., a young woman, 20 years of age, in good health, of strong, vigorous, athletic quality, in August, 1902, entered into a tennis competition in a neighboring town. The heat of the day was excessive, and the tennis match was long-drawn out. At its conclusion the patient was very much exhausted by her exertions and the prolonged exposure to the heat. She repaired to the dressing-room, and by a warm bath and an alcohol rub was made as comfortable as possible. Within the next twenty-four hours she developed severe paroxysms of sneezing and a hyperemic condition of the nose, which resisted all forms of treatment for what was supposed to be a severe cold. The attacks continued, at intervals, until frost supervened. At almost the same date in the following year the same symptoms returned, and ever since that time the woman has been a member-elect of the "Pollen Club." Furthermore, at any season of the year after violent exercise and superheating, severe sneezing-spells occur.

CASE 2.—S. H., male, a golfer, 30 years of age, strong and healthy in every respect, came under my observation for the relief of a summer cold. The victim had played some 40 or 50 holes at golf upon a frightfully hot day and had been completely exhausted. The next day a severe cold had appeared, for which no treatment availed, and, from that day on, the "Pollen Club" had still another member who had the habit.

CASES 3 and 4.—Two women, H. S., and D. C., upon the 28th day of the month of August, 1900, played a strenuous match on the golf-links, and both contracted upon the following day what was supposed to be a summer cold. Treatment was unavailing. The hay fever habit became thereafter firmly fixed upon them, and August 12th to 14th was the period at which they annually sought a colder climate, supposably free from the prejudicial pollens. Previous to that time neither of these women had ever had the slightest symptoms, and there was presumably just as much pollen in the air previous to

that 28th day of August, 1900, as there ever was afterwards.

Permission has been granted me to quote the two following cases not occurring in my own practice:

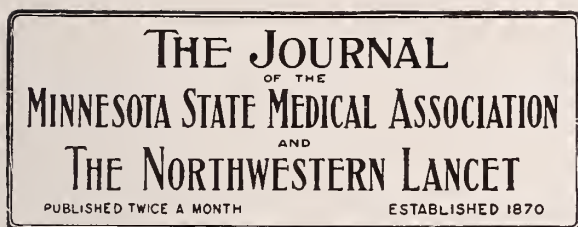
CASES 5 and 6.—B., residing, in the year 1907, in a metropolitan city, was a very great sufferer from hay fever, and every previous year had been compelled to make his annual retreat to a cold and supposedly pollen-free climate. Unfortunately for him, business was such, in 1907, that it was impossible for him to go into his accustomed retirement. He was, however, in the cold-storage business, and upon consultation with his physician he conceived the novel idea of making his own climate. He fitted up his office of three rooms with refrigerative apparatus in such a way that the temperature was approximately the same as that to which he had been accustomed in his hay-fever resort. While in his office so equipped he remained always free from attack, but whenever he returned to his home he suffered just the same as usual. The idea of living in his office suddenly occurred to him, and he converted one room into a bedroom and thereafter passed a fairly comfortable summer. The only exceptions to his comfort were noted whenever he took any liberties with the temperature and allowed his rooms to become heated above a certain point. Thereupon, he immediately had symptoms of distress. As regards exposure, these rooms were not more protected from particles of pollen, dust, etc., than any other offices in the building, and no extra efforts were made to eradicate dirt or dirt-carried bacteria. In 1903 this gentleman found a fellow sufferer and they agreed to form a club of two and spend the summer at home. They consented to allow a physician to watch and record their conditions, and the following experiments were carried out: In the first week of their seclusion, the rooms were most thoroughly cleansed and freed, so far as possible, from all dirt. The patients had their meals brought to them and were virtually prisoners except for business purposes. In the second week one of the rooms was filled with pollen-bearing plants and dust of any and every description was admitted, but the temperature of the room was kept low. The patients slept here

and never sneezed once, nor were they, in any way, uncomfortable or distressed. This was continued for one entire week, and still no difficulty was experienced by either. The third week the rooms were once more cleansed, but the temperature was increased to somewhat over summer heat. The patients were replaced in the rooms and within an hour were suffering from attacks. They immediately retired into a low temperature and were at once relieved.

In each of these cases the history shows that the initial attack was preceded by a physical strain, involving great muscular exertion under conditions of excessive heat and sun-exposure. Such an experience induces, physiologically, great activity in the upper respiratory tract, attended by extreme vasodilation in the nasal field, and the exposure of this warm moist field to contact with much super-heated air. It is not infrequent, under such circumstances, that the evidence of stasis in the capillary blood-vessels is had in a free epistaxis. It is not at all uncommon to see such conditions followed by the evidences of infections, of varying type, through this over-warm moist area of the nose.

In each of these instances a severe nerve-storm, characterized by long-maintained dilation of the vessels, irritation of the nerve-terminals, etc., developed. Is it not possible that the vasodilator mechanism was thereby subjected to so severe a strain as to induce in it a continued susceptibility which, physiologically, answers more quickly to the influences of extreme heat than to anything else? Whenever it so responds it is easy to understand that pollen-bacteria, dust-bacteria, or any other pathogenic forms may find their opportunity.

The conclusive point is, that the climatic relief which cases of hay fever experience, is not to be credited to any pollen-free or bacteria-free atmosphere, but to the general diminution of atmospheric temperature which it provides for an overworked vasodilator mechanism in the upper respiratory field. The effects of cold-storage in the cases, to which I have been permitted to refer, suggests this relationship and the possibility of providing refrigeratoriums for this large class of sufferers. At least, the problem is one with which the physiologist, rather than the pathologist, may have to deal.



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PUBLICATION COMMITTEE OF THE COUNCIL
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St. Paul St. Paul
F. A. KNIGHTS, M. D.
Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

June 1, 1911

TO BATHE OR NOT TO BATHE! THAT'S THE QUESTION

Sir Almroth Wright, the eminent London bacteriologist, has thrown a bomb into the hygienists' camp by declaring that our long-cherished principles of washing, fresh air, and physical exercise are quite wrong. At least, he is so quoted by the lay press from his lecture on "Bacteriology and Health."

This statement will be received with applause by the great unwashed and by many small boys, if they should happen to hear of it. There are many who would swallow such a statement whole without finding out what Sir Wright really meant because they are looking for excuses to shirk conventional customs. It must be remembered that Sir Almroth Wright is a bacteriologist, and he looks at disease with a microscopic eye, and he believes that most diseases can be cured by vaccines, rather than by Nature's methods. There is, doubtless, some truth in what he says, but his wholesale condemnation of water, air, and exercise as remedies should not be accepted as the whole truth.

A few extracts from a report of his views will serve to show the theories he holds:

THE EFFECTS OF WASHING

There is a belief that by washing, people wash off the microbes. We do take off a certain amount of microbes, but we also destroy the protective skin which

is all around our bodies like the tiles of a house. When one has a horny hand no microbe ever can get near the skin. A great deal of washing increases the microbes of the skin, so I do not think cleanliness is to be recommended as a hygienic method.

FRESH AIR

The religion of fresh air has all sorts of dangerous sides to it. The fresh air treatment for consumption I hold to be a dreadful superstition.

At the London Hospital not long ago certain men were put in a glass cage. Finally the air became very hot and the men became sleepy. Then the doctor, by a turbine arrangement, without letting in a drop of fresh air, stirred up the vitiated air and the men became lively again.

The whole of the doctrine of fresh air requires revision. It is awkward to be in a crowded room because it gets hot, but that upon these effects a whole theory should be built up and large amounts spent on fresh air is deplorable.

MICROBES

Few persons have yet appreciated that the non-infective diseases are due to microbes. Hygiene is a question of fighting microbes. The program has been to kill the microbe outside the body. That is difficult to do.

Against this policy we have the policy of killing the microbe inside the body, and that can be done if we take the trouble to study it. The body has protective and destructive substances and these can be enlisted in the fight. Research is necessary.

It is no good filling hospitals with patients we do not know how to treat. I have seen twenty-one doctors round a rich man's bed, and not one of them knew anything about him.

WRONG THEORIES

I do not feel that with regard to public hygiene, domestic hygiene, or private hygiene, we have reached any valuable knowledge, and if we never apply that which we have we shall not be much worse.

There is a widespread belief that if you have no disease you can keep it away by following certain rules, and that if you have a disease you can make it better by following them. That is a religion I have no sympathy with.

I was on the plague commission in India and recommended all sorts of sterilization of floors, but that, although it cost a lot, did no good; the fleas came hopping along and did not care whether the floors were disinfected or not.

This literature is not for public distribution, and it is best that the physician should decide what part of it is right or wrong.

If we accepted these statements as final we might as well sit down and wait for infection to begin its work before we undertook to escape from its sources.

We cannot kill microbes unless we have the weapons or vaccines, and as yet no methods are available for the general practitioner. Laboratories are few, and the distances between them are great. In coming years physicians may be

able to carry an assortment of sera, but until that time comes we must continue to bathe, exercise, and inhale clean air.

The physical culturists have expressed their opinions of Sir Almroth Wright in no uncertain tones, but many of them go to great extremes when they rely entirely on water, air, and exercise for the cure of all ills. There is a medium and safe course that the wise man will follow, and there is no general fear that medicine and surgery will be relegated to the ash-heap.

SCHOOL-INSPECTION IN MINNEAPOLIS

More than two months ago a report of the work of the school-inspectors was handed in to the Board of Education. A total of 3,391 pupils were seen by the inspectors, and while 1,621 got a thorough examination, 932 were found to have infectious diseases, and the balance was made up of those who had a second examination after having been excluded from school or were those selected for examination as being suspected of having contagious diseases.

The school nurses paid 531 visits to pupils' homes, and 337 parents visited the nurses at the schools to ask questions as to the treatment of their children.

Of the 1,621 children who were thoroughly examined, 61 were suffering from mal-nutrition, 186 were anemic, 619 had enlarged tonsils, 618 had seriously defective teeth, 473 had adenoids, 284 had defective vision, 126 had enlarged glands, and 78 were defective in hearing.

Over 1,100 children received treatment during the month of January, and the attendance at the University Dispensary has increased 30 per cent since medical inspection was put in effect.

This report was published in the daily press, and a later and more complete report will be published soon. The report speaks for itself, and no other argument is needed to show the benefits of school-inspection.

By the time the next Board of Tax Levy meets all opposition to medical inspection in the public schools in Minneapolis should be silenced. Notwithstanding the efforts of the anticults, the showing will carry conviction, and medical inspection here will soon be on a par with that done by other cities that have carried it on successfully for years.

A city will spend thousands of dollars for a civic display that is for general advertising or personal aggrandizement, but it is like pulling a tight cork from a narrow-neck bottle to get

money enough to save children from suffering when the cause can be readily removed.

LOUISIANA'S CAMPAIGN FOR HEALTH

Dr. Oscar Dowling, president of the Louisiana State Board of Health, began the "Gospel of Health" when he originated the health-train idea. Other states and cities have sent out exhibit trains showing the products and resources of the farm and factory, but this is the first time any effort has been made to educate the people with an exhibit of modern methods of curing and preventing disease. This novel train has a car in which is shown how food should be cared for and prepared, and a third car in which the doctor and his assistants live while preaching the gospel of health. Each town to be visited by the train is circularized in advance announcing a program and exhibits. An inspection is made, on the lines laid down by Mrs. Crane, in each city, and frank criticisms and recommendations are offered by the health staff. In this way better sanitary conditions of living and working are discussed. Water-supply, sewage-disposal, slaughter-houses, clean dairies, markets, bakeshops, schools, jails, restaurants, railroad stations and the like are discussed before the people in an intelligent and forceful manner.

A campaign of this kind will do an immense amount of good, and the people will appreciate and follow advice of this sort. It has been shown that the public, including local sanitary authorities and even medical men, welcome information that is for their benefit. We are apt to presume that the general public know something of hygiene, but as a matter of fact the ignorance displayed on health topics is so great as to seem incredible.

In spite of the efforts of politicians to belittle the work of health officers, the education of the people will go on until their representatives will be forced to accept definite laws governing the public health. Small towns and villages, under the guidance of their representatives, are inclined to resent interference or advice, but when the public once understands the value of good-health measures more care and cleanliness will be the order of the day.

Louisiana deserves much praise for the health-train idea and it should be copied all over the States. Those of us who experienced the rebuffs of some of the members of the late legislature in Minnesota envy Louisiana, and we wonder how its State Board of Health secured suffi-

cient appropriations to carry on the work of the health-train.

If such a proposition had been presented to our late legislative body it would have died a sudden and violent death.

The Minnesota State Board of Health will continue its propaganda of education and, in co-operation with physicians throughout the state, will attempt to prepare each representative for the passage of bills for the preservation of health.

All personalities must be pushed into the background, and every doctor must see that his senator and representatives understand each proposed health-bill before they go to St. Paul two years hence. The work is not exacting, but it must be persistent.

The difficulties of convincing politicians of needed reforms is not great, provided it is carried on with sane arguments and painstaking explanations.

We must remember that non-medical men know little of medicine, and that the local physicians can do much to enlighten the laity.

THE LOS ANGELES MEETING

The meeting of the American Medical Association, which will be held in Los Angeles June 26th to 30th, is gaining in popularity as the time approaches, and many tired doctors are looking forward to this vacation which can be filled with many changes of scene.

The men in the East are unaccustomed to such long journeys, but the men in the Middle East and the Middle West, will not hesitate to undertake the trip.

The preliminary program suggests an interesting session, and the final program will show many additions. Undoubtedly, a few men who have promised papers will be unable to go, and a few will remain at home on account of a dread of a hot journey, but a good attendance may be expected.

The opportunity of meeting the workers in the West will attract a large number from various localities, and no one will regret the opportunity to see California and its wonders.

THE JOURNAL-LANCET urges the men from Minnesota and the Dakotas to turn out in large numbers, particularly to make a good showing. Many Minnesota men are on the program, and they must keep Minnesota to the front.

The West is the place for medical meetings this year. Denver has two meetings the week

previous to the meeting of the A. M. A. The American Medicopsychological Association and National Association for the Study and Prevention of Tuberculosis on June 20th and 21st.

The medical editors' meeting takes place in Los Angeles on the 23d and 25th of June, and the annual conference with Surgeon-General Wyman on June 24th at San Francisco. Then comes the conference of State and Provincial Boards of Health, following the adjournment of the A. M. A. on June 30th to July 1st. This gives one plenty to do and enough to hear.

BOOK NOTICES

THE ANATOMIC HISTOLOGICAL PROCESSES OF BRIGHT'S DISEASE AND THEIR RELATION TO THE FUNCTIONAL CHANGES. A series of lectures delivered by Dr. Horst Oertel, director of the Russell Sage Institute of Pathology. W. B. Saunders & Company, Philadelphia and London, 1911.

This is one of the most interesting works of the year. It is composed of five lectures, profusely illustrated by full-page plates.

In his first lecture the author assumes that the kidney is the most difficult organ for the student because of the intimate correlation that it has with the other organs of the body, the difficulty of establishing a proper relationship between structural and functional changes, and because of the multitude of views held with regard to the normal and pathological functions and the anatomical and histological changes in the kidney. It is impossible, he says, to have an appreciation of the relative value of the present ideas unless we are fully acquainted with the origin of these ideas and the development through which they have passed.

At present there are essentially three interwoven disputed points which are fundamental.

1. What inflammations of the kidney are to be included under the heading of Bright's disease?

2. What are the characteristic features of the inflammations?

3. Are there any non-inflammatory processes which form essential parts of this disease?

He points out that pathological processes are processes that are forever changing, hence the stricter and more circumscribed a classification the more faulty it will always be. "Guided by

such considerations, it will be my endeavor to present essentially the certain anatomical and histological knowledge which was gradually accumulated in the course of time, and which constitutes the fundament of the whole structure. I shall treat these changes in their general genesis and relation to each other and to the associated functional disturbances."

He then proceeds with a masterly historical review, marking the mile-stones as he advances. Of Bright's disease, he says: "It may be said that almost everything which Bright advanced, as far as pure observation goes, has stood the test of time until today." Little by little we find that the distinctions over which the great teachers fought have become merged, not only pathologically, but clinically, that the early nomenclature has become changed and is at present a source of confusion, and, further, that there is no satisfactory classification, either pathological or etiological. As a result of this study, he answers the first question as follows:

"I think it has gradually developed to limit its application to the non-specific hematogenous, non-purulent inflammations of the kidney, and we may exclude from it, therefore, all non-inflammatory affections, particularly the chronically congested kidney and its after-results, further amyloid and fatty infiltrations, and the senile atrophy of the kidney. Specific inflammatory lesions of etiology and morphology have, also, by virtue of their characteristic etiology and morphology, been eliminated, as well as ascending inflammation from the bladder."

As to the second question, he points out that the terms *parenchymatous*, *interstitial*, *diffuse*, persist like threads, but of ever-changing colors, throughout the histological development of inflammation in general and nephritis in particular, and insists that we break with their use, as a differentiation between parenchymatous and interstitial inflammation is practically impossible. Equally objectionable are the two terms *acute* and *chronic*, as when does an acute nephritis become chronic? Again, a disease that is clinically acute may show the pathological lesions of a chronic nephritis or *vice versa*.

He therefore proposes a new nomenclature. Starting with nephritis, he adds descriptive terms, as nephritis *simplex* where predominating features are lacking or of minor importance; nephritis *degenerativa*, *exudativa*, *hemorrhagica*, and *prolifera*, or these may be used in combination, as nephritis *degenerativa et productiva*, or

nephritis *degenerativa adiposa*. Again, in senile kidney where there is no inflammation he speaks of *atrophia* and *sclerosis renum*, respectively.

In his second lecture, he reviews the histological structure of the kidney and takes up the various conceptions which are held with regard to the secretion of urine. He concludes that there are two processes concerned in the production of urine. The first is transudation, which process is conducted by the glomeruli, whose duty it is to regulate the concentration of the blood. He assumes that this transudation from the glomeruli is modified on its way by the epithelial cells of the tubules, the secretory portion. He believes that the stagnation of the transuded water in the convoluted tubules is for the purpose of complete solution of nitrogenous elements discharged by the epithelium of these tubules. He confesses ignorance of the specialized functions of the various parts and types of epithelial cells composing the tubules and of the details of the secretory act.

Taking up the discharge of urine from the pelvis of the kidney, he shows how the active waves propelling the urine through the ureter into the bladder, take their origin in the pelvis and similarly force the urine into the ureter.

In his third lecture, he gives a detailed description of *nephritis simplex*, commonly, and, he believes, improperly, called *acute nephritis*, *acute parenchymatous nephritis*, or *acute parenchymatous degenerativa of the kidney*. This is the form which is most frequently found in connection with all types of fevers and in toxic and cachetic states and in some poisonings. It is characterized by parenchymatous degeneration and inflammatory edema. His discussion of parenchymatous degeneration is extremely interesting, he giving a historical review and his own conclusions. He says: "From my own observations I believe that the process depends upon outside influences which, either by excessive stimulation of the cell-activity or by direct harmful influences, produce disturbances in the composition of the protoplasm, which necessarily lead to changes in the organization of the parts and temporary or permanent cell-injury. The appearance of the granules I also regard as an indication of changed protoplasmic constitution whereby the normal composition and arrangement are gradually lost; and I attribute the swelling to the thus altered physical conditions of the cell and its changed environment. Depending on the degree of the injury and the correlated

disturbances in the protoplasm, the cell either adapts itself to the new environment or changes its character entirely by undergoing further degenerative (fatty) changes or complete disorganization." "The result of simple nephritis is restitution to integrity in the majority of cases. The inflammatory edema subsides and after clearing of the lymphatics, is resolved; the glomeruli and the vascular apparatus, not having undergone permanent injury, assume their former condition. The epithelium also regenerates rapidly inasmuch as only little of it has undergone actual necrosis, and the kidney may, therefore, be said to recover completely unless conditions supervene which, prolonging the interference, gradually lead to the more severe types of kidney inflammations!"

He then considers nephritis proliferata, which is characterized, not only by parenchymatous degeneration and inflammatory edema, but by marked desquamation of epithelium and excessive proliferation of the same; next, nephritis degenerativa et exudativa, taking up the discussion of the difference between an inflammatory and degenerative process. He regards degenerations as evidence of an injury or the passive features of an inflammation contrasted with the proliferative and exudative reactive phenomena of the process.

He says that these degenerative and exudative nephritides are always the result of intense general and characteristic intoxications and infections; above all, the acute exanthems, particularly the late stages of scarlet fever. He describes the gross and microscopic pathology and illustrates the whole with numerous full-page microscopic drawings. He discusses casts and their formation, ending, as usual, with his own views. Finally, he takes up the interstitial changes and resultant urinary condition. From this study he draws the conclusion that we have merely an accentuation of features of a nephritis, and are not dealing with independent distinct diseases.

In his fourth lecture, he treats of the "Results and Terminations of Degenerative and Exudative Nephritis." He says: "I am of the opinion that at least the majority of cases of late nephritis have been ushered in by previous degenerative exudative lesions, which, having become latent, have been disregarded clinically until their progress has led to a point where the organism is unable to adapt itself. Then it produces manifestations which appear new and sudden, but might have been anticipated long ago." The discussion of fatty degeneration and fatty in-

filtration is extremely interesting, as also of the other chemical changes that occur, and the description of nature's efforts to get rid of this degenerated tissue is a revelation to the old-time student of kidney lesions. The condition now reached is known under the name of *secondary contracted kidney*. He there describes the pictures produced by venous stasis, and shows how difficult it may be to determine whether we have, primarily, a heart-lesion with progressive venous stasis, or, primarily, a nephritic lesion which has led to circulatory disturbances and a secondary venous congestion. He concludes the chapter with a description of the functional changes of the kidney in relation to the pathological changes described.

The fifth chapter is a consideration of what he calls *productive nephritis*, or what is commonly called chronic interstitial nephritis. He believes that there is no essential anatomical difference in any of the changes which occur in this type of productive nephritis from those which he has already discussed. He considers that here we have merely a combination of all the inflammatory features previously discussed. Far-advanced fibrous areas with hyaline, contracted glomeruli, lost or distorted tubules, may change abruptly to better preserved and even healthy kidney parenchyma in the state of compensatory hypertrophy. This again adjoins patches of kidney substance which are the seat of recent inflammatory degenerative and exudative foci. He points out that because these changes are slow, Nature has a fine opportunity to make compensatory changes and proceeds to teach us how she does it. He then shows how cysts are formed, and then goes into the subject of vascular changes and their pathogenesis. He concludes that the thickness of the vessels which is observed during the progress of a nephritis, originates either from conditions arising within or outside of the kidney, and that both factors may be active. In consequence of the arterial thickening, he shows us how we get infarctions.

Taking up arteriosclerotic kidney or senile kidney, which he calls *sclerosis* or *atrophia renum*, he shows that this is the result of a nutritive disturbance and that the condition is characterized by pronounced thickening and narrowing of the blood-vessels. He follows the changes occurring with the result that it is possible for us to appreciate how we may have a granular, cicatricial, and atrophic kidney which is not the result of inflammation.

Next follows an investigation into the prob-

lem of the relation of parenchymatous loss to the fibrous tissue-formation; cause of the increased flow of urine in spite of the great waste of kidney substance. Now, leaving the kidney, he takes up the changes in the other organs.

First, the heart and its hypertrophy. This occurs only when associated with an appreciable rise of blood-pressure, but the factors leading to increased blood-pressure may be lacking, or the organism may be unable to respond to these factors, or a once established hypertrophy may give way to later atrophy. Hence, the hypertrophy occurs and persists only when the nutrition of the organ is kept up to the necessary standard. This hypertrophy may occur as early as four weeks after the beginning of a nephritis.

The cause of increased arterial tension and heart-hypertrophy occupies a most interesting section of this chapter. Oertel is of the opinion that, "In different forms of nephritis, different factors enter into the production of rise in blood-pressure, hypertrophy of the heart, and some of these are to be found outside of, and some within, the kidney. In the first place it appears probable that in the early stages of productive nephritis a toxic factor must be of great issue. This, as evidence indicates, cannot be a retained urinary product, but must be either an infective or metabolic poison which increases the tonicity of all blood-vessels within and outside of the kidney in permanent fashion leading to rise in blood-pressure, hypertrophy of the heart and a gradual waste of kidney-substance. The fact that inflammation of the serous membranes was often associated with nephritis was known to Bright. Oertel explains it as the result and expression of a general irritant to the lymphatic system in nephritis.

As to the causes of edema and hydrops, Oertel concludes, "The edema of nephritis depends primarily on an output of serum through injured capillary ducts, which cannot be removed on account of similar injury to the lymphatics and probably the surrounding tissues." Later in the disease, metabolic and mechanical circulatory disturbances, as well as retention, may alter the composition of the blood and the vessel-walls to favor further the passage of watery elements through the capillary system. Oertel, in his parting word to clinicians, desires to impress that, first, "no nephritic process is an independent lesion of the kidney, for it depends, in an essential degree, upon concomitant and correlated changes outside of the kidney." "Second, in

the symptomatology of nephritis, the complex clinical pictures of the various types may be separated into two great groups of symptoms,—the renal and extra-renal." In the early stages of slowly progressing productive nephritis, for instance, the extra-renal symptoms are of much greater value and importance than the renal for the kidney is still sufficient and, if anything, hyperfunctionates. Not until much later occur the superadded evidences of the serious renal involvement. On the other hand, in some of the rapidly developing exudative degenerative types, the symptoms of the renal affection may dominate from the start, and later become modified by the extra-renal changes.

A MANUAL OF PHYSICAL DIAGNOSIS. By Breyer Ralph O'Reilly, M. D., C. M., University of Toronto. Philadelphia: P. Blakiston's Son & Co., 1911. Three hundred and sixty pages.

This is an admirable book. It is not merely a compendium of diagnostic procedure by physical methods, but it reflects the author's broad view of the whole subject of dealing with the patient. It is this perspective of the subject which is often lacking in both small and large text-books. Dr. O'Reilly has expressed the importance of accurate observation, detail in history-taking, and careful work in special examination, preserving at the same time the relationship of each to the finished diagnosis.

Especially commendable is the stress laid on careful inspection of the patient. What is written on this subject in chapters III and IV could profitably be reviewed by most practitioners as well as students. The chapter on examination of the respiratory tract is very well written, emphasis being placed on the importance of an accurate knowledge of the origin, location, and significance of findings in the chest, rather than in an artificial classification of abnormal sounds elicited during the examination.

The reviewer anticipated a well written book from the first on seeing that the author had the help of referring parts of it to Barker, Osler, and Mackenzie, and was not disappointed on finding a readable, concise, and yet broad presentation of his subject.

A sharp pain felt at the outer end of the groin upon sudden motion of the thigh, as in starting forward from a crouching position in a foot race, suggests fracture of the anterior spine of the ilium. This occurs usually in adolescents.—*American Jour. of Surgery.*

REPORTS OF SOCIETIES'

THE HENNEPIN COUNTY SOCIETY

A stated meeting of the Society was held on May 1st, Dr. T. F. Quinby in the chair, and forty-five present.

The Executive Committee, through the Secretary, reported as follows:

The Committee moves that a commission be appointed to act with the Vice Commission in investigating the possibility of legislation having for its object the prevention of the spread of venereal disease, (1st), by requiring the reporting of venereal diseases; (2d), by legislation making the transmission of venereal diseases a criminal offense, and (3d), by legislation requiring a physical examination before marriage.

The Committee also recommends the adoption of the following resolution:

Resolved, That it is the sense of the Hennepin County Medical Society in meeting convened that so heinous an offense as death the result of abortion criminally produced is not properly punished by imposition of a money fine, and that such a form of punishment conduces to the increase of this class of offenses, and, if our law admits of a fine as punishment for such offense, that such law should be expunged from our statutes.

The motion was seconded and carried.

The motion of the Executive Committee to appoint a commission to co-operate with the Vice Committee in the suppression of venereal disease was seconded, and carried.

Dr. J. H. Redd was elected to membership.

The following committee was appointed for securing the meeting of the American Medical Association in Minneapolis in 1912:

Dr. T. W. Stumm read a paper on "Routine Examination in the Gastro-intestinal Tract," and the papers were discussed quite at length by Drs. Sweetser, Dunsmoor, Quinby, Staples, Little, White, and, in closing, by Dr. Stumm.

Dr. Iver Sivertsen read a paper on "Conservative Gynecology," and the same was discussed by Drs. Litzenberg and Adair, Dr. Sivertsen closing the discussion.

Dr. F. S. Bissell presented a series of radiographs.

C. H. BRADLEY, M. D., Secretary.

NEWS ITEMS

Dr. A. J. Berger, of Milwaukee, Wis., has located at Olivia.

Dr. James E. Cramond, of Rugby, N. D., will move to Montana.

The government hospital at Hot Springs, S. D., is to have two new buildings.

Dr. Elmer Nicholson, of Brainerd, has entered the "Crank Club" with a broken arm.

Dr. J. E. Cowperthwaite has moved from Butte, Mont., to Wisdom, in the same state.

D. Wm. Moir has moved from Excelsior to Minneapolis and has offices at 1044 Donaldson Bldg.

Dr. O. Hallberg, who practiced for a number of years in Chisago County, died last month at Cambridge.

Dr. Glenn O. Hymer, who has been an interne at Asbury Hospital, Minneapolis, for the past year, has located at Olivia.

Dr. O. T. Benson, of Glen Ullin, N. D., and Dr. G. G. St. Clair, formerly of Almont, N. D., have formed a partnership.

Dr. C. G. Weston, of Minneapolis, will leave this month for Europe to be gone three months for surgical and research work.

Dr. L. B. Bell, of Frederick, Wis., was killed last month in an automobile accident, the machine going off a high embankment and turning over.

The Methodists of the state propose to raise \$70,000 at once to complete Asbury Hospital, in Minneapolis, an institution of which that church is justly proud.

Plans have been completed for the new Lutheran Hospital at Watertown, S. D., and work on the building will be begun at once. The cost will exceed \$60,000.

Dr. J. T. Holcomb, a former student of Hamline and a graduate of Jefferson Medical College, has located at Chisago City. Dr. Holcomb spent a year in Bethesda Hospital of St. Paul.

Dr. Christian Johnson, of Willmar, announced to the Commercial Club of that city last month that he was authorized to state that a citizen of Willmar would contribute \$5,000 toward the building of a city hospital.

Dr. George Schulze, formerly of Owatonna, after spending nearly a year in Germany, has located in Minneapolis, with offices at 2946 Lynsdale Ave. South. Dr. Schulze studied, while abroad, mostly in Berlin, devoting his time to gynecology and surgery.

The Sioux Falls (S. D.) District Medical Association has arranged for a series of popular meetings to advance public health interests. At the first meeting, held last month, Dr. Cottam spoke on "Fourth of July Accidents," and Dr. Perkins spoke on "Medical Inspection in the Public Schools."

Dr. H. A. Tomlinson, Superintendent of the St. Peter State Hospital, goes to Boston on June 3d as one of the State Commissioners to investigate the work of the Congress for the Feeble-minded, Insane and Delinquent. He will also look into the work of the Society of Eugenics which is investigating the causes of insanity.

Dr. Ray Humiston, of Worthington, died on May 10th, at the age of 37, of pneumonia, contracted by exposure while making a call. He was a graduate of the State University, class of '03, and at the time of his death was the head physician of the hospital at Worthington. His widow now offers the hospital for sale. See the announcement at the end of the news department.

The South Dakota State Medical Association will hold its annual meeting at Pierre on the 15th and 16th of this month, the House of Delegates meeting on the 14th. The program embraces fourteen papers. Dr. Arthur J. Gillette, of St. Paul, and Dr. C. N. Spratt, of Minneapolis, are the only men outside of South Dakota on the program. The social side of the meeting will not be neglected.

The Montana State Medical Association held its thirty-second annual meeting at Butte, Montana, on May 10th and 11th, with sixty members in attendance. The papers read were largely upon subjects now uppermost in both the professional and the lay mind, and the discussion was unusually full. The social features of the meeting were well taken care of, and the meeting was pronounced by all the most successful yet held. The officers elected for the current year were as follows: President, Dr. T. C. Wither-
spoon, Butte; vice-president, Dr. R. C. Monahan, Butte; secretary, Dr. H. D. Kistle, Butte; treasurer, Dr. C. T. Pigo, Roundup.

PHYSICIANS LICENSED AT THE APRIL (1911) EXAMINATION TO PRACTICE IN MINNESOTA

UPON EXAMINATION

Allen, Chas. C. U. of Minn., 1910
Colp, Donald G. Hamline, 1908
Dezell, Earl R. Hamline, 1908
Hayes, Jas. M. U. of Minn., 1910
Lannin, Justin C. McGill, 1909
Lewis, Arthur John. Rush, 1909
Maclean, Chas. Geo. Greig. McGill, 1909
Myre, Chas. F. Lavall, 1899
Smith, Leon G. U. of Minn., 1910
Verity, Walter. Rush, 1910

BY RECIPROCITY

Bentz, Geo. H. Kansas City Med. Col., 1902
Campbell, Claude M. Northwestern, 1910
Clement, Thos. Gage. U. of Colorado, 1910
Cress, Peter Joseph. Wis. Col. of P. & S., 1908
Dady, Elmer E. Marquette, 1910
Edwards, Ralph T. Johns Hopkins, 1904
Hilts, Geo. H. U. M. Col., Kansas City, 1908
Hammerstrand, F. L. P. & S., U. of Ill., 1909
Kavanagh, Kate S. Trainor.
Hahnemann, Chicago, 1891
Koller, Herman M. St. Louis U., 1910
Lynch, Elizabeth A. Marquette, 1910
Ohlinger, Lorin B. Western Pa. Med. Col., 1900
Ravn, Bjarne. Northwestern, 1908
Refsdahl, Olof. Northwestern, 1910

BOOKS AND INSTRUMENTS FOR SALE

Books (Homeopathic), instruments, operating-table, nine pairs of tooth forceps, red cross dry-cell battery, etc., of the late Dr. C. L. Gates, are for sale. Address Mrs. Hattie E. Gates, Hancock, Stearns Co., Minn.

PRACTICE FOR SALE

A \$4,000 practice in a Minnesota city of 6,000 people, is offered for sale, together with the seller's office furniture, for \$1,200 cash. Good schools, hospital facilities, and a prosperous people—no bad accounts. Must sell before June 1st, or offer will be withdrawn. Address O. C., care of this office.

PRACTICE FOR SALE

I will sell my practice, paying in cash between \$2,500 to \$3,000 a year, and office furniture for a reasonable cash price, if taken before July 1st. Good location in an inland town of 300 population with large surrounding territory, 40 miles from Minneapolis. Rich German and Scandinavian community; only physician. The electric short line will reach here by fall. Address S. W., care of this office.

HOSPITAL FOR SALE

The Dr. Ray Humiston Hospital, at Worthington, Minn., is offered for sale on account of Dr. Humiston's death. Hospital is modern and fully equipped. For particular, address Mrs. Ray Humiston, Worthington, Minn.

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MINNEAPOLIS

WE HAVE TAKEN SPECIAL PAINS THIS SEASON WITH OUR SELECTIONS OF SUMMER FURNISHINGS. Our steadily increasing business in Summer Furnishings in Specialized Departments has enabled us to secure the Exclusive Sale of Some Exceedingly Meritorious Merchandise, including the Beautiful, Artistic and Durable "Kaltex" Furniture, Superior in Appearance and Wearing Qualities to either Rattan, Willow or Fibre; also some Novelties in Mattings for Floor Coverings never before seen in Minneapolis; a Charming Assortment of Fabrics and Curtains for Summer Window Treatments; the Deservedly Popular "Vndor" Porch Shades; a Splendid Assortment of Lawn Swings, Hammocks, Settees, Swinging Couches, Veranda Chairs and Tables, together with Conveniences and Comforts for the Dining Room, and its important adjunct, the Kitchen, of Proven Merit.

WE WOULD CALL PARTICULAR ATTENTION TO OUR LINE OF REFRIGERATORS, including the Reputable "Bohn" Syphon System and other Refrigerators manufactured by The White Enamel Refrigerator Co.; also All Meritorious Makes of Lawn Hose, Sprinklers, Lawn Mowers. In fact, Everything to make the Summer Enjoyable and Comfortable, whether it be for the Inside or the Outside of the House, and whether the House be a Modest Cottage, Bungalow or something more pretentious.

OUR EQUIPMENT OF AUTOMOBILES FOR LAKE DELIVERY SERVICE has been augmented and, take it all in all, we are in the best of shape to take care of the Seasonable Needs of our Customers.

PUBLISHER'S DEPARTMENT

MUDBADEN

How many of our readers, we wonder, do not know that at Jordan, Minn., an hour's ride from St. Paul and Minneapolis, is an institution for giving sulphur mud baths equal in every respect to the oldest and best institution in this line anywhere? Mudbaden is its name, and it is a name already widely known; in fact, the place is running up to its capacity most of the time.

SWEDISH MOVEMENT AND MASSAGE INSTITUTE

It is always a pleasure to call the attention of our readers to be above Institute, which was founded by some of our leading physicians for the benefit of the profession, and Mr. Thomsen was selected by them to conduct it. He has never departed from the business methods laid down by the founders of the Institute, and he has always maintained the confidence and has the generous support of the Minneapolis profession.

A NOVEL ADVERTISEMENT

On our third cover page appears an advertisement which cannot well mislead, and yet it says much. When a preparation or an article has been

long enough and favorably enough known its name is sufficient advertisement; and the fact of its high standing with the public or with the profession cannot better be made known than by this manner of advertising. The Fellows Company have established a reputation for their "Syrup of Hypophosphites" which justifies this kind of advertising.

A FREE OFFER

On another page the Frank S. Betz Co. makes a very generous offer in connection with the sale of each package of "606," of which they are importers. Every physician who has occasion to prescribe the new remedy will be interested in the Betz Company's liberal offer.

A GOOD BISMUTH PREPARATION

After an exhaustive study of the chemical and physical properties of bismuth and its compounds, the chemical experts of Parke, Davis & Co. two or three years ago succeeded in perfecting what many physicians consider the most eligible preparation of the kind—Milk of Bismuth, P. D. & Co., a mixture containing the hydrate oxide of bismuth in suspension. The product is stable under all ordinary conditions of temperature and exposure to light and air.

The advantage which Milk of Bismuth, P. D. & Co., possesses over other compounds of the metal is the state of fine subdivision in which the hydrated oxide is presented. This insures its more thorough distribution over the mucous surface of the alimen-

tary canal, upon which it exerts a peculiarly beneficial effect. Its action is not only astringent, but, as some writers have observed, it appears to have a specific effect upon certain lesions, as ulcers, causing them to heal. It is also an antacid and protective, and undoubtedly is mildly antiseptic. Each fluidrachm of Milk of Bismuth, P. D. & Co., represents the bismuth equivalent of 5 grains of the sub-nitrate.

ABDOMINAL SUPPORT IN THE LATER MONTHS OF PREGNANCY

The great value of abdominal support in the later months of pregnancy is more thoroughly appreciated today than ever before. The important thing, however, is to secure support that meets a patient's needs without causing discomfort or producing undue pressure over sensitive regions.

Backache and "dragging down" pains are often so severe that a patient, to obtain temporary relief, will not infrequently suffer excessive constriction as the lesser of two evils. Fortunately this is unnecessary, and the use of the Storm Binder affords effective relief from backache, etc., without the slightest undue or unpleasant pressure. This is attributable to the fact that this Binder has been devised along scientific lines, with painstaking regard to avoiding harmful pressure as well as to securing adequate support. The benefits that come from wearing the Storm Binder are apparent, therefore, from the first, and not patient who has ever worn one will willingly forego the comfort and relief that can be so easily and pleasantly obtained.—*American Medicine*, April, 1911.

FORMULA FOR LINIMENTS MYALGIA

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Olei Terebinth, pur.....	5ii
Chloroform	5
Tinct. Aconit	5s
Betul-Oil	5
Ol. Olive	3

M. ft. Lin.

Sig.: To be applied (with friction) if possible, over the affected muscle.

Texas Med. Jour., Nov., 1908.

THE SUPRARENAL SITUATION

The United States Circuit Upholds Product Patent on the Natural Active Principle

When Vulpian, a French chemist, reported, in 1856, that the suprarenal glands of mammals contained a peculiar substance giving certain color reactions with ferric chloride, iodine, and alkalies, and quickly changing in contact with the air and on exposure to light, little might anyone have expected that fifty-five years later this peculiar substance would be the subject of a product patent.

In 1904 the H. K. Mulford Company placed upon the market Adrin, its brand of epinephrine, the active principle of the adrenal gland, believing that the pioneer work done by von Fürth and Abel justified it in doing so, and that a product patent on the active principle existing in nature could not possibly be upheld, particularly in view of the fact that its existence had been recognized for fifty years; that nearly all of its chemical reactions and properties

were previously known and described; that its medicinal virtues had been discovered and put chemical nature had been accurately predicted; that into practical use; and that it had been actually isolated in various degrees of purity in the form of a benzoylated derivative and in the form of a zinc and iron compound.

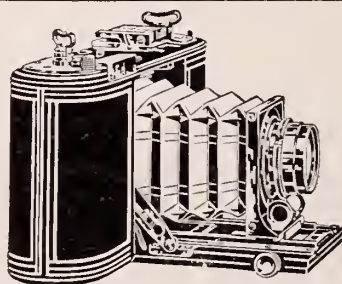
The H. K. Mulford Company regarded its product as a substantially different product obtained by a substantially different process, from those specified in the Takamine patent and did not believe that the latter could, if held valid at all, be construed to cover and include the Mulford product.

Moreover, the H. K. Mulford Company, recognizing that the first object of the patent law is to "promote progress in the Sciences and Arts" believed, and still believes, that the granting of product patents on medicinal substances, whether or not they exist pre-formed in nature, are a hindrance to, rather than a means of promoting, progress in the practice of medicine, and used their efforts to defeat a product patent which it deemed to be not only contrary to the object and spirit of the patent law, but contrary to the best interests of pharmacologic practice in the United States.

On April 29, 1911, Judge Hand, in the United States Circuit Court for the Southern District of New York, handed down a decision sustaining certain of the patent claims of Dr. Takamine and declaring H. K. Mulford Company products to infringe these claims.

The H. K. Mulford Company wishes to call attention to the fact that in defending these suits it has consistently and at great cost endeavored to uphold its antagonistic position toward the product patent for medicinal substances, believing that product patents on all substances used in medicine, work an injustice on the medical and pharmaceutical professions and are inimical to the public good.

The court having decided that the manufacture of Adrin, the Mulford brand of epinephrine (the active principle of the adrenal glands), conflicts with the product patents granted to Takamine, the H. K. Mulford Company will discontinue its manufacture in the form of solution, tablets, and hypodermics, until their appeal is decided in the higher court. Other preparations which have contained the Adrin brand of epinephrine will be prepared with an amount of purified extract of adrenals equivalent to the active principle contained in the glands.



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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, JUNE 15, 1911

No. 12

TRANSACTIONS OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

TWENTY-FOURTH ANNUAL MEETING

1911

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FOR THREE YEARS

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H. M. WHEELER, M. D.....Grand Forks

FOR ONE YEAR (to fill vacancy)

A. M. CARR, M. D.....Minot

The twenty-fourth annual meeting of the North Dakota Medical Association was held at Fargo on May 9 and 10, 1911. An address of welcome was made by V. R. Lovell, mayor of the city, and an appropriate response was given by Dr. A. J. McCannel, of Minot.

The attendance was about the usual number that attend our State Association meeting, there being 100 registered. The program was attractive, and the papers presented were well prepared and provoked considerable discussion.

The Secretary's report showed a marked growth in membership, and the addition of two component societies during the year,—the Southwestern and the Hettinger County.

The Treasurer's report showed all bills paid,

the income being \$760.00 for the year, with an outlay of \$838.45, leaving a balance of \$535.56 with which to begin the new year.

The House of Delegates recommended to the Councilors the importance of organizing county societies in every county. It was thought that smaller societies are productive of more good than larger ones which cover such an area of country as to make it practically impossible for members to attend without the loss of too much time from their practice.

THE JOURNAL-LANCET was adopted as the official organ of the State Association, and the proceedings and all papers read at the annual meeting will appear in this publication during the year, and no volume of proceedings will be is-

sued, but THE JOURNAL-LANCET will be sent to every member of the State Association.

The Secretary of the Association was designated as the associate editor for the coming year. All news items and reports of local societies should be forwarded to the Secretary or sent direct to THE JOURNAL-LANCET, Minneapolis.

All discussions taken by the stenographer will be submitted to the authors, and a reasonable time will be given to correct and return the same before publication, giving every one an opportunity to be correctly reported.

The Committee on Medical Defense made the following report, which was unanimously adopted:

REPORT OF THE COMMITTEE ON MEDICAL DEFENSE

It is unfortunately true that suits for mal-practice against physicians and surgeons are becoming more and more frequent in North Dakota. It is also true that the large majority of these suits are neither more nor less than attempts at blackmail, and would never be started were it not for the hope of some unscrupulous client or a shyster attorney that the defendant physician, rather than incur the expense and publicity of a trial, would pay over a few dollars as the cheapest way out.

The defense of a single suit for mal-practice is a very expensive proposition for three reasons: The first is, that no lawyer is likely to have many such suits to defend, and so each suit necessitates a complete briefing of the entire subject and to properly brief one of these cases takes a great deal of time on the part of the lawyer and a corresponding amount of money on the part of the client. The second reason is that medical-expert testimony, which is so necessary in the trial of these cases, is very expensive. And the third reason is, that the lawyer who successfully defends one of these suits rightly considers that he should be well repaid for it.

Two plans of medical defense have been tried, and both are working very successfully. The first is insurance in some company that, for a payment of ten or fifteen dollars a year, agrees to defend all suits brought against the assured and pay any damages assessed by the courts. The other is a plan by which the medical association sets aside a part of each member's dues and engages an attorney on salary to defend all suits brought against any of its members without undertaking to pay any damages assessed against the defendant. It is then the duty of the attorney for the association to brief the whole subject of medical defense and to keep his brief up to date, which brief shall be the property of the association. Then when a suit is begun against any of the members all papers in the case are prepared by this attorney; in fact, he takes entire charge up to the time of going into court. When the trial begins this attorney, or some local attorney, goes into court and tries the case and receives a *per diem* fee for the time actually spent in its trial. Then, if the case should be carried to the supreme court, the association's attorney again has entire charge of the

case, and a *per diem* fee is paid, as before, for the argument before the supreme court.

This plan makes it unnecessary to brief every case separately, for the law on the subject is always at hand. It also reduces to a minimum the expense of trying the case.

The expense connected with this method of defense has been found very small. Most state associations working under this plan set aside one dollar per member each year as a medical-defense fund, and in every case this has been found more than sufficient to defend all suits that arose.

Your committee therefore begs leave to submit its report in the form of a recommendation that the By-laws of the Association be amended as follows:

In Chapter 8, add after the word *arrangements*, the words "A committee on medical defense," and after Section 4 insert Section 5 as follows: "The committee on Medical Defense shall consist of an Executive Board of five members to be elected by the House of Delegates and also one member from each component society to be elected by the component societies. The first Executive Board shall be elected for one, two, three, four, and five years, respectively, and thereafter one member shall be elected each year to hold office for five years. All other members of the Committee shall be elected for one year."

Add Chapter 12 to the By-laws to read as follows:

Section 1. Active members of the North Dakota State Medical Association who have paid all dues, assessments, and other charges assessed or levied by the North Dakota State Medical Association, shall be entitled, on conditions hereinafter specified, to receive, without personal expense therefor, legal advice and court service of an attorney or attorneys-at-law in the employ of the Association, witness fees for the purpose of conducting their defense in any court in this State, when they are accused of mal-practice, or of illegal transactions in connection with the commitment of persons to institutions for the insane.

Section 2. It shall be the duty of the Committee on Medical Defense to investigate all claims of mal-practice against members, to adjust such claims with equity where possible, and, if in their judgment an adjustment is impossible, or the claim is unjust, or the damages sought are excessive, to tender such help, aid, and counsel as they may see fit. They shall be empowered to contract with a member of the bar of North Dakota as legal counsel of this Association.

Sect. 3. The Committee on Medical Defense shall make an annual report to the House of Delegates at the annual meeting for the year previous ending March 31st. This report shall contain an enumeration of all suits or threatened suits for mal-practice against members of the North Dakota Medical Association which have been properly presented to them for action.

Sec. 4. The legal services herein provided shall be granted only on the following conditions:

First. Any active member desiring to apply for mal-practice defense hereby provided, shall, immediately upon receipt thereof, send to the Secretary of the North Dakota State Medical Association, any letter, process of court, or other evidence of threatened litigation in connection with such mal-practice case.

Second. It shall be the duty of the Secretary to forthwith examine the financial records of the North

Dakota State Medical Association, and if such member so applying is found to have paid all arrearages, dues, or other charges due the North Dakota State Medical Association for the year, he shall certify those facts to the Committee on Medical Defense of the North Dakota State Medical Association, and forthwith send to such Committee the papers received from the applicant for defense, and such Secretary shall forthwith return to the applicant, if he shall find that the applicant has paid all arrearages due the North Dakota State Medical Association, a formal application for defense containing authority for the said Association through its attorney to defend the action and granting to the Association and its attorney, sole power to conduct the defense thereof, and agreeing not to compromise or settle said claim for damages for said alleged mal-practice without the consent of the North Dakota State Medical Association or its attorney. The said applicant shall furnish and return to the Secretary with his application duly executed, a full, accurate, and complete history of his treatment of the case out of which the alleged mal-practice arose, giving dates, names of witnesses, nurses, and other attendants, all of which information shall, upon its receipt by him, be forwarded by the Secretary of the North Dakota State Medical Association to the Committee on Medical Defense of the Association.

Third. If, on the other hand, the Secretary finds that any member so applying has not paid all arrearages as herein specified, then and in that case he shall return at once to the applicant all papers or memoranda received by him from said applicant, together with a statement that he is not entitled to defense and the reason therefor.

Fourth. It is further understood between each and every member of the North Dakota State Medical Association that under no condition or contingency will the North Dakota State Medical Association pay any sums awarded in settlement, compromise, or by any verdict against any member sued for alleged mal-practice, and each member applying for the services of the attorney of the Association in any mal-practice case, shall agree not to obligate in any manner the North Dakota State Medical Association or any persons connected therewith to the payment of any sums whatsoever for any purpose.

Fifth. The North Dakota State Medical Association will assume the defense in a suit for mal-practice against a member only when the cause for the alleged mal-practice occurred subsequent to the date on which the member joined the Association.

Sixth. This chapter shall be in force on and after May 1, 1912.

We also recommend that the dues of the Society be increased to five dollars per year.

Respectfully submitted,

May 8, 1911.

A. J. McCONNEL.

The annual dues to the State Association were increased to \$5.00 to provide a fund to meet the expenses of medical defense.

The Committee on Necrology made an exhaustive report on the death of I. M. McBride of Rugby, one of the pioneer physicians of that portion of the State, and the Secretary was in-

structed to send an abbreviated copy to the family of the deceased and to furnish a copy to the Rugby papers.

Dr. James Grassick, Superintendent of Public Health, made the following report for the Antituberculosis Association, and aid to the amount of \$100.00 was promised the committee when the State Association has available funds.

REPORT OF THE ANTI-TUBERCULOSIS ASSOCIATION

To the Officers and Members North Dakota Medical Association:

At the regular annual meeting of your Association in 1909 the North Dakota Anti-tuberculosis Association was endorsed as an active agency in preventive medicine, and a grant of \$75.00 was given to it. Being thus a recognized beneficiary of your body it becomes incumbent on us to give an account of our stewardship. We beg leave to report that, as far as was consistent with our resources, we have instituted and carried on an educative campaign as to the main facts concerning the communicability, preventability and curability of tuberculosis. The press of the State has been supplied regularly with reading matter, and it is rare to find a newspaper that does not give some space to this subject. A number of local anti-tuberculosis associations have been organized, and, by meetings, lectures, and literature, they have done much to arouse public sentiment. To carry on an educative campaign requires money. To recruit our treasury we accepted the agency for the sale of Red Cross stamps and seals for North Dakota. From this source we cleared \$940.00 in 1909 and \$782.00 in 1910. In doing this we had two objects in view: first, as a money-producer for future work, and, second, as an educator. We are of the opinion that in both of these we have been reasonably successful. From the funds thus secured we have further extended our educative propaganda. In 1910 we furnished 700 ministers of North Dakota literature and outlines for anti-tuberculosis sermons for "The Anti-tuberculosis Sunday," April 24th. As a result there were 300 sermons given on that date, and a mass of literature was distributed to the people. In 1911 we repeated this, but on a larger scale. One thousand invitations were sent out, and "Anti-tuberculosis Day," April 30th, was observed in over 500 places in our State, and the gospel of health and hope was preached to the masses of the people. Anti-tuberculosis literature was distributed at each meeting.

Recognizing the value of an exhibit illustrating the leading facts pertaining to the disease, we have had one under way. It consists of diagrams, tabulations, maps, mottoes, views, and other matter bearing on the disease that might bring home to the people in a forcible way the influence it bears on our social and economic fabric. We expect to add to it as we may be able. We had this exhibit displayed in the lobby of our State Capitol at Bismarck during the last legislature, and we have reason to believe that its influence there was very beneficial. We have had it shown at several other places throughout the State, and just as soon as our funds will permit we purpose extending this feature of our work.

We also beg leave to report that we maintained a

legislative lobby at Bismarck during the last two sessions of our legislature. We had introduced in 1909 a bill providing for an appropriation for the purchase and improvement of a site for a State sanatorium for the tuberculous, and in 1911 one for an appropriation for the erection and equipment of a sanatorium on such site. We had the satisfaction of seeing both bills become law.

We recognize that the sympathy, co-operation, and support of the State Medical Association means much for our success. We feel that we are doing a work for humanity, one that you can ethically endorse. We appreciate the financial assistance given us two years ago, and we would respectfully request that our cause be remembered in a substantial way at the present session if the funds of the Association will permit.

All of which is respectfully submitted,

J. GRASSICK,
President.
FANNIE DUNN QUAIN,
Secretary.

Fargo, N. D., May 9, 1911.

The Committee on Public Policy and Legislation reported that they prepared a new board-of-health bill and that it was passed unanimously by the House and favorable action was promised by the Senate, but the bill was side-tracked in the closing hours of the session. The Committee is of the opinion that the work done can be used for the next meeting of the legislature, and recommended a new committee to further revise and improve the draft of the proposed bill and that provision be made for sufficient funds to take care of the measure when introduced. The report was approved.

The Committee on Public Health reported as follows:

REPORT OF THE PUBLIC HEALTH
COMMITTEE

There have been a considerable number of public meetings in the State during the past year, at which subjects pertaining to the public health were discussed. Three such meetings were held at Grand Forks and also at Carrington. Meetings were also held at Litchville and at Hatton. At Carrington and Litchville the meetings were not very well attended. Two meetings at Grand Forks were fairly well attended, and one was very largely attended. The subjects up for discussion were as follows: "Refuse Disposal with Special Reference to the Construction of an Incinerator;" "The Water Supply of the City;" "Infantile Paralysis;" "Colds;" "Sanitary Slaughter-houses and Meat Inspection." The Commercial Club of Grand Forks had two dinners at which physicians gave addresses on public health questions. These meetings were a great success and should be copied by other cities in the state.

At Grand Forks, Bismarck, and Valley City the civic leagues have been active in getting improvements along the lines of sanitation. We believe that much can be accomplished by the members of this Association if they will work in harmony with such organizations.

Branches of the Public Health Laboratory were established at Minot and at Bismarck, and in both of these

cities, milk and dairy inspection was started at the same time, and is being thoroughly carried out.

Popular newspaper articles have been written from time to time in Bismarck and Grand Forks, and the papers are always very glad to accept these and print them in a prominent place. We recommend that more use be made of this means of instructing the people.

Dr. F. R. Smyth has compiled a table showing the death-rates per 1,000 population in eight of the principal cities of this state. The table also makes a comparison between the death-rates in North Dakota cities and those in other cities in the United States and Europe, and is worthy of careful study by everyone interested in the health of our cities. The table is as follows:

MORTALITY STATISTICS, NORTH DAKOTA
CITIES, 1910

City	Population Census, 1910	Deaths			Death-rate per 1,000 population		
		a	b	c	a	b	c
Bismarck	5,443	66.	43.	109.	12.2.	7.8.	20.0
Mandan	3,876	83.	3.	66.	13.6.	0.9.	14.5
Dickinson	3,678	27.	13.	40.	7.3.	3.5.	10.8
Jamestown	4,358	57.	7.	64.	13.0	1.6.	14.6
(Deaths at State Hospital for Insane not included)							
Valley City....	4,606	46.	37.	83.	9.9.	8.0.	17.9
Fargo	14,960	214.	64.	278.	14.3.	4.2.	18.5
Grand Forks....	12,478			149.			11.1
Minot	6,188			47.			7.6
a Residents.							
b Non-residents.							
c Total.							

Death-rates (per 1,000 population)	
From Reports of United States Census Office, 1908	
United States (registration area).....	15.4
Washington, D. C.....	19.3
New York	16.8
Chicago	14.0
St. Louis	14.5
Minneapolis	10.3
St. Paul	10.1
London, England	13.8
Edinburgh, Scotland	11.7
Dublin, Ireland	23.0
Berlin, Germany	16.4
Vienna, Austria	17.6
Stockholm, Sweden	14.7
Paris, France	17.5

It will be noticed that the death-rate in some of our cities is unduly high. In trying to ascertain the cause of this condition it was discovered that many of the death-certificates do not state the exact cause of death, but are made out in a rather vague manner. It was also learned that nobody makes it his business to enforce the vital-statistics law and hence many deaths are not recorded at all, and in many cities and towns the records are imperfectly kept.

We also wish to call attention to the fact that according to statements of the Superintendent of the State Board of Health, the infant mortality in this State is shockingly high. Over 30 per cent of all children born in North Dakota die before they are one year of age, whereas the percentage of deaths under one year in the registration area of the United States is only 19.7.

The causes of these conditions cannot be ascertained

as long as our vital statistics are not more carefully collected and preserved. As long as the causes are not accurately known, it is difficult to get an improvement because we do not know where to strike. We believe that this Association should take some steps to bring about a better enforcement of our vital-statistics law. We believe also that there should be a reorganization of our State Board of Health in such a manner that the Board would be taken out of politics. A bill providing for a reorganization of the Board was introduced into the legislature last winter, but was lost in the Senate. This bill was, however, defective in several particulars and especially in regard to the provision that the secretary and executive officer shall be in active practice. To get good results it is essential that the executive officer shall devote all of his time to this work, and be entirely out of practice.

G. F. RUEDIGER,
C. E. SPICER,
M. MACGREGOR,
EDWIN L. GOSS,
F. B. SMYTH.

Their recommendations that the Public Health Committee be continued, and that a committee be appointed to assist in the collection and preservation of vital statistics, were approved.

The committee to which was referred the President's address favored the public-health act defeated in our last legislature, and recommended that steps be taken towards its adoption at the next meeting of the legislature. The committee also suggested that the medical-defense scheme be presented to the membership for discussion, so that their views might be known to the House of Delegates, and this was done. They heartily concurred in the recommendation to prosecute any person who is guilty of performing illegal criminal operations, and believed that the new medical-practice act covers the law in that respect, and they urged the members of the Association to assist in its enforcement. They strongly condemned the practice of rebating of fees or of secret fee-splitting, and urged the members to uphold the dignity of our profession and refuse to voluntarily co-operate with any person who practices the same.

REPORT OF THE DELEGATES TO THE

A. M. A.

Mr. President and Gentlemen of the House of Delegates:

Concerning the stewardship of your affairs with the American Medical Association, I beg leave to say that all matters that have been referred to the National Association through your delegate to that body have been amicably and satisfactorily adjusted. Our State Association has been given due credit, and has received due commendation, for its excellent work in advancing the standard of medical practice in our commonwealth to the elevated position it now occupies among the few states having the

highest requirements in preliminary work and test-examinations for license to practice.

The Council on Medical Education, in its report to the House of Delegates last June, placed the medical department of the University of North Dakota high in the list of educational institutions in the country. It holds the seventh place in the sixteen institutions first to adopt two or more years' requirement of college work in addition to the four years high-school education that limited the old standard. Their report also heartily commends the work of our State Board of Medical Examiners.

It may be of interest to you to know that among the seven states that have adopted the new standard of an additional two years in preliminary work, North Dakota heads the list.

The esteem in which the medical profession in our own state is held by the national body is high, and has been manifested in the many important committee appointments that have been tendered your representative in that body.

The American Medical Association is the largest organized association of professional men in the world. Its present membership is upward of 35,000. Its financial condition is excellent, there being surplus assets of more than \$400,000. Its percentage of membership to the total number holding membership in state bodies varies from 22 to 63 per cent. In this table of the states, North Dakota again holds a conspicuous place at the head of the list.

Few who have not been brought into close touch with the working of this magnificent organization fully realize its scope and influence. Its activities during recent years, aside from purely business and routine work, have been directed toward the betterment of the conditions that affect public health. In this laudable field and to this end its work has been projected along the lines of legislation and medical education, elevating and standardizing the requirements qualifying medical practice; teaching the public in a knowledge of right living; preaching through its publications and its public speakers the gospel of health and rational methods in maintaining it; turning the search-light of publicity upon quacks and obnoxious pretenders; forcing the "diploma-mills" out of existence; stimulating low-grade schols into a higher quality of work, and inducing others to close their doors or combine with institutions having a higher standard of requirements; standardizing and classifying drugs that the physician may have a better understanding of the quality of his armamentarium; striving for truth wherever truth may be found regardless of creed or school practice; harmonizing conflicting elements in the great body of practitioners; making at all times an impartial fight for both the physician and the public for pure food, pure drugs, and saner conditions of life; and teaching that all who labor for truth must come at last to common ground—this is the function and the work that have characterized the institution in which body, by your grace, during the past eight years I have held honorable membership. Its work is largely philanthropic, and the fullness of time will give it a place among the great philanthropic organizations of the world.

V. H. Stickney.

The list of officers elected for ensuing year is given above.

The following names were selected and recommended to the Governor for appointment on the State Medical Examining Board: J. E. Country-

man, H. G. Woutat, A. J. McCannel, G. M. Williamson, Paul Sorkness, F. R. Smyth, A. W. Skelsey, and A. G. Patterson.

The next meeting of the Association will be held at Valley City, on May 8 and 9, 1912.

DISTRICT AND COUNTY ROSTER

SHEYENNE VALLEY MEDICAL SOCIETY

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SECRETARY
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Brimi, C. L. Cooperstown
Claybough, W. R. Comos, Mont.

Crosby, E. B. Oriska
King, C. J. McHenry
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Macdonald, A. W. Valley City
Nolte, W. C. Dazey
Platou, L. S. Valley City
Pray, E. A. Valley City

Rasmussen, F. P. Kathryn
Spear, E. D. Nome
Spicer, C. E. Litchville
VanHouten, J. Valley City
Westley, M. D. Cooperstown
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Zimmerman, C. A. Valley City

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SECRETARY
Wood, W. W. Jamestown
Artz, P. G. Jamestown
Gerrish, W. A. Jamestown

Girvin, R. B. Cleveland
Goldseth, G. Jamestown
Guest, A. W. Jamestown
Hattendorf, Jessie. Jamestown
Miller, Harry. Jamestown
Moore, Dwight S. Jamestown

Movius, A. H. Jamestown
Sansing, C. Courtney
Todd, G. D. Medina
Van de Erve, W. Pingree
Wink, Helen K. Jamestown
Wood, W. W. Jamestown

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SECRETARY
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Bartley, Wm. Sheyenne
Clark, I. D. Harvey

Crawford, John. Esmond
Hotchkiss, Wm. Jamestown
MacKenzie, J. Roy. New Rockford
MacLachlan, Chas. New Rockford
McClusky, O. W. Carrington
Steele, E. G. Plentywood, Mont.
Brown, Fred. McClusky

Clay, Albert James. Bowden
Goss, E. L. Carrington
Joyce, M. T. Harvey
MacKenzie, J. Ross. Carrington
Moore, Will H. Sykeston
Olson, O. A. Oberon

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SECRETARY
Rucker, F. T. Mott

Hamilton, E. E. Bentley
Hill, Simon W. Regent
Leslie, A. C. Regent

Redmon, F. E. Mott
Rucker, F. T. Mott
Stribling, J. W. New England

GRAND FORKS DISTRICT MEDICAL SOCIETY

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SECRETARY
Wilson, W. C. Grand Forks
Arneberg, J. G. Grand Forks
Arnold, E. W. Fordville
Beck, R. H. Lakota
Bentzen, Olaf. Grand Forks
Burrows, F. N. Bathgate
Caldwell, G. W. Grand Forks
Campbell, R. D. Grand Forks
Church, R. J. Lankin
Countryman, J. E. Grafton
Crane, C. S. Grand Forks
Deeson, F. W. St. Thomas
Dickey, R. R. Conway
Donovan, E. I. Langdon
Duggan, F. J. Grand Forks
Eggers, Aug. Grand Forks
Ekern, A. Grand Forks

Engstad, J. E. Grand Forks
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Field, A. B. Forest River
Gibson, S. J. Langdon
Gislason, G. J. Grand Forks
Glaspel, G. W. Grafton
Grassick, Jas. Grand Forks
Harris, C. B. Pembina
Healy, H. H. Grand Forks
Hetherington, J. E. Reynolds
Irwin, S. H. Grand Forks
James, H. I. Bathgate
King, R. J. St. Thomas
Landry, L. H. Wallhalla
Law, H. W. F. Hannah
Lawton, E. N. Sarles
Lemery, B. D. Inkster
Marsden, C. S. Grand Forks
McDonald, A. L. Grand Forks
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Mulligan, T. Grand Forks
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Sandven, N. O. Park River
Scott, W. W. Walhalla
Slifield, F. A. Grand Forks
Smith, J. C. Thompson
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Taylor, John D. Grand Forks
Wager, W. D. Michigan City
Welch, W. H. Larimore
Westeen, A. A. Grand Forks
Wheeler, H. M. Grand Forks
Williamson, G. M. Grand Forks
Wilson, H. S. Crystal
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Fisher, A. M. Bismarck

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Horsman, A. T.....Devils Lake

Jones, W. D.....Devils Lake

Lamont, J. G.....Cando

Lemieux, D.....Dunseith

Linder, E. R.....Egland

McIntosh, G. J.....Devils Lake

McGurrien, C. J.....Devils Lake

Moeller, J.....Maddock

Roberts, F. J.....Cando

Robertson, W. F.....Dunseith

Sihler, W. F.....Devils Lake

Smith, Clinton.....Devils Lake

Verrett, B. D.....Rolla

Warren, J. W.....Leeds

Widmeyer, J.....Rolla

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Blatherwick, W. E.....Drake

Brugman, F. A.....Minot

Carr, Andrew.....Minot

Christie, F. J.....Burlington

Coffin, G. H.....Dogden

Collinson, H. M.....Rugby

Craie, O. S.....Towner

Cramond, J. E.....Rugby

Davies, J. S.....Granville

Doe, A. L.....Bowbells

Duncan, J. A.....Upham

Dunn, J. C.....Stanley

Durnin, Chas.....West Hope

Durnin, Geo.....West Hope

Eltun, T. J.....Velva

Erenfeld, H. M.....Anamoose

Fisk, D. A.....Carpio

Fitzmaurice, E. S.....Mohall

Flath, Milford G.....Stanley

Godfrey, W. H.....Russell

Halderson, M. B.....Souris

Hillis, S. J.....Berthold

Husser, A. A.....Berthold

Johns, S. M.....Velva

Johnson, J. A.....Bottineau

Joyce, T. M.....Anamoose

Kermott, L. H.....Minot

Kolb, F. K.....Granville

Kron, L. O.....Williston

Lancaster, Blake.....Crosby

Limburg, A. M.....Bowbells

MacKay, A. R.....Bottineau

MacManus, F. W.....Buford

McCannel, Archie D.....Minot

McCannel, A. J.....Minot

McLean, N.....Kenmare

Newlove, J. T.....Minot

Newlove, J. W.....Minot

Nicholson, A. S.....Max

Olson, Martin I.....Minot

Owenson, H. A.....Deering

Paulson, A. J.....Flaxton

Pence, J. R.....Minot

Pierson, C. M.....Ambrose

Plourde, W. A.....Overly

Rainville, S.....Tolley

Ransom, E. M.....Minot

Ray, R. H.....Garrison

Ringo, G. Roy.....Minot

Rogers, Joseph.....Donnybrook

Rudell, L. Rudd.....Plaza

Scott, W. B.....Ray

Sommers, A. J.....Portal

Stewart, M. A.....Omeme

Stone, E. C.....Balfour

Stone, Guy O.....Minot

Stobie, R. H.....Tioga

Taylor, J. D.....Minot

Thams, Thomas.....Minot

Titul, C. I.....Minot

Trainer, M. E.....Stanley

Wheelon, F. E.....Minot

Wiig, I. C. J.....Kemore

Windell, H. C.....Williston

Youtz, H. LeMont...Willow City

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Alexander, J. C.....Tower City

Almklov, L.....Cooperstown

Altnow, H. O.....Mandan

Anderson, A. G.....Hillsboro

Arneberg, J. G.....Grand Forks

Arnold, E. W.....Fordsvil

Arzt, P. G.....Jamestown

Bailey, Fred H..... Fargo

Baillie, W. F.....Hunter

Baldwin, W. P.....Casselton

Barbour, H. W.....Edgeley

Bartley, Wm.....Sheyenne

Beach, Robt. H.....Dickinson

Beañ, O. G.....Wolcott

Beek, R. H.....Lakota

Begtrup, O. N.....Rugby

Bell, D. H.....Kenmare

Benn, F. G.....Kulm

Bennett, C. E.....Aneta

Bentzen, Olaf.....Grand Forks

Berg, S. A.....Aneta

Blanchard, H. B.....Columbus

Blatherwick, W. E.....Drake

Bodenstab, W. H.....Bismarck

Boslough, A. W.....Dwight

Bowen, Jesse W.....Dickinson

Brandt, A. M.....Bismarck

Brenckle, J. F.....Kulm

Brimi, C. L.....Cooperstown

Brown, Fred.....McClusky

Brown, W. G..... Fargo

Brugman, F. A.....Minot

Bunting, F. E.....Mandan

Burrows, F. N.....Bathgate

Bursma, J.....New Salem

Burton, P. H..... Fargo

Busch, U. F..... Fargo

Bussen, L. H.....Richardton

Cady, Isaac M.....Taylor

Cain, A. T.....Underwood

Caldwell, G. W.....Grand Forks

Call, A. M.....Rugby

Callander, C. N..... Fargo

Campbell, Frand J..... Fargo

Campbell, J. W..... Fargo

Campbell, R. D.....Grand Forks

Campbell, T. R.....Arthur

Canfield, H. C.....	Hatton	Grassick, Jas.....	Grand Forks	MacLachlan, Chas..	New Rockford
Carpenter, Geo. A.....	Fargo	Greene, L. B.....	Monango	MacLachlan, T. M.....	Bismarck
Carr, Andrew.....	Minot	Greenman, N. H.....	Fairmount	MacManus, F. W.....	Buford
Carter, J. A.....	Warwick	Gronwold, A. C....	Fort Ransom	MacNab, Alex B.....	Beach
Chagmon, Napoleon.....	Horace	Guest, A. W.....	Jamestown	Maercklein, O. C.....	Dickinson
Christensen, W.....	Lidgerwood	Haagensen, E. C.....	Hillsboro	Mallarian, K. H.....	Fargo
Christie, F. J.....	Burlington	Halldorson, M. B.....	Souris	Marsden, C. S.....	Grand Forks
Church, R. J.....	Lankin	Hamilton, E. E.....	Bentley	Martin, T. P.....	Streeter
Clark, I. D.....	Harvey	Hamilton, J. S.....	Hansboro	McCannel, Archie D.....	Minot
Clark, S. B.....	Buffalo	Harris, C. B.....	Pembina	McCannel, A. J.....	Minot
Clay, Albert James.....	Bowden	Harris, F. C.....	Cando	McClusky, O. W.....	Carrington
Claybough, W. R.....	Comos, Mont.	Harwood, C. B.....	Hope	McDonald, A. L....	Grand Forks
Coffin, G. H.....	Dogden	Hattendorf, Jessie....	Jamestown	McGurren, C. J.....	Devils Lake
Collinson, H. M.....	Rugby	Hcaly, H. H.....	Grand Forks	McIntosh, G. J.....	Devils Lake
Colville, Robt.....	Belfield	Hedding, J. A.....	Hope	McIntyre, Geo.....	Mayville
Countryman, J. E.....	Grafton	Heimark, A. J.....	Finley	McLean, N.....	Kenmare
Craise, O. S.....	Towner	Heinze, C.....	Clifford	McLean, R. M.....	Gilby
Cramond, J. E.....	Rugby	Hetherington, J. E....	Reynolds	McManus, W. F....	Grand Forks
Crane, C. S.....	Grand Forks	Hill, Simon W.....	Regent	Meckstroth, L. W....	Wahpeton
Crawford, John.....	Esmond	Hillis, A. E.....	LaMoure	Moeller, J.....	Maddock
Critchfield, L. R.....	Galesburg	Hillis, S. J.....	Berthold	Montgomery, John.....	Ardoch
Crosby, E. B.....	Oriska	Hoffman, P. E.....	Fargo	Moore, Dwight, S....	Jamestown
Curtiss.....	Haines	Horsman, A. T.....	Devils Lake	Moore, Will H.....	Sykeston
Cuthbert, W. H.....	Devils Lake	Hotchkiss, Wm.....	Jamestown	Morris, A. C.....	Fargo
Dahl, P. I.....	Devils Lake	Husser, A. A.....	Berthold	Morvius, A. H.....	Jamestown
Darrow, E. M.....	Fargo	Irwin, S. H.....	Grand Forks	Mulligan, T.....	Grand Forks
Davis, H. A.....	Dickinson	Ivers, U. M.....	Abercrombie	Murphy, F. E.....	Grand Forks
Davies, J. S.....	Granville	James, H. I.....	Bathgate	Museus, H. Benj.....	Beach
Deeson, F. W.....	St. Thomas	Jameson, A. J.....	Wheatland	Neff, Elizabeth A.....	Emerson
Devine, Robt. H.....	Wahpeton	Johns, John G.....	Hettinger	Neil, A. Monroe.....	Bowman
Dickey, R. S.....	Conway	Johns, S. M.....	Velva	Nelson, W. P.....	Knox
Doc, A. L.....	Bowbells	Johnson, J. A.....	Bottineau	Newlove, J. T.....	Minot
Donovan, E. I.....	Langdon	Jones, W. D.....	Devils Lake	Newlove, J. W.....	Minot
Duggan, F. J.....	Grand Forks	Joyce, M. T.....	Harvey	Nichols, A. A.....	Fargo
Duncan, J. A.....	Upham	Joyce, T. M.....	Anamoose	Nichols, Will C.....	Fargo
Dunn, J. C.....	Stanley	Kachelmacher, C.....	Fargo	Nicholson, A. S.....	Max
Durnin, Chas.....	Westhope	Kellogg, P. M.....	Tolna	Noltz, W. C.....	Dazey
Durnin, Geo.....	Westhope	Kermott, L. H.....	Minot	O'Brien, T.....	Wahpeton
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Field, A. B.....	Forest River	Kron, L. O.....	Williston	Patterson, T. P.....	Lisben
Fish, H. G.....	Hope	Labbitt, L. H.....	Enderlin	Paulson, A. J.....	Flaxton
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 Sayler, H. L..... Cogswell
 Scanlon, Wm..... Page
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 Schneider, J. E..... Bowman
 Scott, W. B..... Ray
 Scott, W. W..... Walhalla
 Sihler, W. F..... Devils Lake
 Skelsy, A. W..... Fargo
 Sliffield, F. A..... Grand Forks
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 Steele, D. C..... Fairmount
 Suter, J. C..... Grafton
 Smith, Clinton..... Devils Lake

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 Smith, F. Dale..... Reeder
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 Steele, E. G... Plentywood, Mont.
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 Stobie, R. H..... Tioga
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 Thams, Thomas..... Minot
 Thelen, W. P..... Wilton
 Thompson, R. C..... Wilton
 Titus, C. I..... Minot
 Todd, G. D..... Medina
 Trainer, M. E..... Stanley
 Tromnes, Nils P..... Fargo

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 Vande Erve, W..... Pingree
 Van Houten, J..... Valley City
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 Wands, E. E..... Lisbon
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 Westeen, A. A..... Grand Forks
 Westley, M. D..... Cooperstown
 Weyrens, J. P..... Taylor
 Wheelon, F. E..... Minot
 Wheeler, H. M..... Grand Forks
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 Wicks, F. L..... Valley City
 Widmeyer, J..... Rolla
 Wiig, I. C. J..... Kenmare
 Wilder, K. W..... Wyndmere
 Williamson, Geo. M. Grand Forks
 Wilson, H. S..... Crystal
 Wilson, W. C..... Grand Forks
 Windel, H. C..... Williston
 Wink, Helen K..... Jamestown
 Witherstine, W. H. Grand Forks
 Wolverton, W. C..... Linton
 Woutat, H. G..... Grand Forks
 Youtz, H. LeMont.. Willow City
 Zimmerman, S. A... Valley City

PRESIDENT'S ADDRESS

BY H. H. HEALY, M. D.

GRAND FORKS, N. D.

In making the annual presidential address, I wish first to thank you for the great honor bestowed upon me. If I have made mistakes in my administration, they have not been wilful, for, I assure you, the welfare of the Association is dear to me.

Once a year the progressive physicians of the State gather in meeting for social intercourse and scientific improvement. This year I have before me the usual number of earnest physicians. To you I extend a hearty welcome to the deliberations of this our 24th annual meeting. I hope you will feel perfectly at home and free to express your ideas.

Next year will mark the quarter century of our Association's existence, and I hope we shall celebrate it by having an unusually large attendance and an unusually interesting meeting.

This year, as in the past, we are very much indebted to outside men for furnishing part of the scientific papers. These men have unselfishly given of their time and energy that we might be edified. To my visiting brothers I wish to extend, in the name of our Association, our thanks and the freedom of the floor. I hope you will enjoy your short stay with us to such an extent that you will be willing to come again.

There have been no startling discoveries in medicine during the past year, except perhaps the announcement by Erlich that syphilis can be cured at once by "606." Later investigations, however, seem to prove that while "606" is of benefit to some cases, it is a disappointment in very many, and mercury is still king.

This is an era of preventive medicine, as is evidenced by organizations of every kind for the prevention of disease. Perhaps the best work has been done by the antituberculosis league. They are, however, all doing much good and deserve our support.

An unusually determined attempt was made to have the last congress establish a national department of health under an additional cabinet officer, as outlined in the Owen bill. That the bill failed to pass was due largely to the concerted effort on the part of the defenders of "isms" and pseudoscientists. These people seem to believe that it would work a hardship to them. Probably they judge others by themselves, and cannot

conceive of the regular physician working for a cause without some selfish interest. A law similar to the Owen bill is necessary to the welfare of our nation. Our's is the only first-class nation without such a law.

Our State legislative committee drew up a first-class public health measure which passed the house of representatives without any trouble, was recommended by the senate committee, but fell by the wayside on account of the increased appropriation that it carried. This bill provided for a board of seven members and called for an appropriation of \$10,000. To take the secretary out of politics a provision was made whereby the board would have the power to appoint as secretary any physician in the State, whether a member of the board or not. No doubt this measure will be brought before the next legislature. In the meantime it would be of great assistance if every physician would work for it. We must not wait until the excitement of the next campaign is on, but should begin now. With the present salary of \$1,200 per year no physician can afford to give up much of his time to the work; in fact, he can be little more than a figure-head. It is the old question of getting what you pay for.

At our last meeting the president was directed to appoint a special committee to draw up a new medical-practice act, to collect money to defray the expense of the campaign, and to push the matter by all honorable means until it became a law. A committee of five was appointed soon afterwards. This committee began the work at once, and kept at it in the face of great obstacles until a very good medical-practice act was passed. The present law raises the standard of medicine in the State very materially; provides a good reciprocity clause, and protects the public from many classes of medical fakers. The committee did a great deal of hard work and deserve commendation.

My predecessor, Dr. Countryman, advocated a medical-defense scheme. Agreeable to his recommendation, a committee was appointed to perfect a plan for the Association to protect its members against malicious mal-practice suits. I believe this plan would not only give us insurance for a fraction of the cost we pay to commercial

companies, but, better still, it would tend to make membership in our Association more desirable and would work for the benefit of all concerned. The committee has, I understand, a complete report. The only question is, whether to adopt the plan now or defer action one year.

While most of our local societies hold regular meetings and are in a flourishing condition there are a few where meetings are seldom held and then often without interest. The latter condition is deplorable, and must be remedied if we are to be respected by the laity. I could not help but notice that during the campaign for our medical bill we received the best support from laymen living in the districts where our local societies are doing good work and where the doctors spoke well of each other. In this connection I wish to say that I believe we physicians are in a measure to blame for the poor opinion many have of the medical profession. If one doctor vilifies another the laity condemns all. It is a lamentable fact that only about one-half of the physicians in the State belong to any society. We need the help of the non-members, but they need the help of the Association more. A man cannot crawl into a shell and amount to much. We are rounded out only by rubbing against our fellow practitioners, exchanging ideas, and receiving inspiration from one another. A greater effort should be made to bring every man within the fold.

Heretofore whenever we have asked for needed legislation the work has been left to one or two men, with results too well known. There has been such a general apathy among the profession that the legislature has hardly taken our requests seriously. We all leave it with the other fellow. Potentially, we have an organization in this State that could achieve much good if we would only work. We are a "sleeping lion." If we would only shake off selfishness and be willing to do something for the common cause,—be big men,—then, and not until then, will our profession receive proper recognition and the public profit to the extent which it should.

While the great majority of physicians are law-abiding, honorable citizens, ever ready to help the needy, for nothing, if necessary, there are a few who seem to have no object in view other than to make money, by right or wrong methods. I refer particularly to those who perform criminal abortions. These men should be gotten rid of, and it is up to us to do it. The

laity expect this of us. A few years ago a late eminent judge, speaking of a well-known local abortionist said that the other physicians should hang their heads in shame till he was put behind the bars. The greatest punishment for such an offender would be to take away his license to practice, which should be done as soon as he is convicted by the courts.

Another cause for mistrust on the part of the laymen is the belief that many unnecessary operations are performed. We know that the great majority of physicians never lend themselves to this sort of thing, but, at the same time, we are morally certain in a few instances that the would-be surgeon is at least too ready to operate. One such instance of this kind found out, works incalculable injury to every member of the profession, and also to the laymen, by deterring the latter from accepting needful, even life-saving, operations.

Our constitution does not allow us to make a fee-bill, but in times past we have seen fit to publish a guide to fees, for the purpose of aiding young or new men in making their charges. I have reason to believe that this guide is responsible for the belief among the laymen that we have a fee-bill. I know physicians have used this guide to show their patients that they have not charged too much. A fee-bill tends to make our Association a trust, or to class us with artisans. A fee-bill is not an equitable arrangement. The services of a man of maturity and large experience, one who has taken many special courses of study in the best medical centers, are worth infinitely more than those of the medical fledgling.

In some of the older states the practice of rebating, secret fee-splitting, etc., has become a crying evil. As yet it is not a common thing among the physicians of our State, but there are those who buy patients of other physicians, hotel-keepers, hack-men, and even ministers, not perhaps at so much a head, but, rather, on a commission basis. The physician who is unable to do surgery sends his patient to the surgeon, and from him receives a commission of from twenty-five to fifty per cent; in the case of the others they receive free treatment for themselves and the members of their families. That this is a pernicious evil there can be no doubt, and so it behooves us to prevent its getting a firm foothold here. It is a game many can play. The young surgeon who is not willing to bide his time and get patients by the merit of his good

work, but is willing to buy business at once by bribery and graft, is sowing tares, which will surely choke the prosperity which should be his in after-life. It is worse than the rankest advertising ever perpetrated on the public. Let us put this abomination from us. I believe the best remedy for this is publicity. The layman should understand that, when his physician unduly insists on having a certain other physician do his work, there is a nigger in the wood-pile. The physician who makes a diagnosis and recommends an operation should charge a reasonable fee. If he does not do so he has either cheapened himself or laid himself open to suspicion, especially so if he offers to accompany the patient to the surgeon free of charge. To indicate what some already think I will relate an incident that occurred last winter during the fight for our bill at Bismarck. Our representative approached, in our behalf, a very intelligent business man and farmer, who stated that he did not care for or believe in Osteopaths and their like, but he also thought that there was considerable commercialism in our ranks. To illustrate this, he said that for years the physicians of his town had sent all surgical cases to a certain well-known and eminent surgeon, but all at once, without any apparent reason, they insisted upon sending them to another and less known firm. Now, he said, what would be your inference?

Again, I say publicity. I believe we should pay a man, perhaps our secretary, a good salary to keep the public informed about medicine and all allied subjects that have a direct bearing upon it. It should be his duty to make clippings and to write articles for newspapers, such as short

historical sketches of medicine and surgery, preventive medicine, recent discoveries, perhaps a story now and then of the work of one like Reed, who gave up his life on the altar of science that we might live, and on the many other subjects that will occur to you.

For the purpose of such reform as I have indicated our present Association dues of two dollars are not enough. There should be sufficient money in the treasury so that it would not be necessary to call for contributions when something special arises. The contribution plan is unfair, as less than half will give, though all will benefit alike. I therefore recommend that the Association dues be raised to at least five dollars. There is not a man in the State who would feel twice that amount. With the additional amount we could do more charity work, pay our secretary more, demand more of him, and always have money on hand for an emergency.

Some time ago a special committee was appointed to report upon the advisability of printing a society journal. The report of this committee was, that it was inadvisable at that time. I do not believe that we are yet ready to print a journal of our own, but I believe that to accept the services of a semimonthly journal, such as offered by THE JOURNAL-LANCET, would be a better arrangement than we now have. As it is, our annual meeting is all but forgotten by the time our volume of proceedings appears, and we have no medium by which we can keep in touch with each other between meetings. I ask for an earnest consideration of the proposal our Minnesota brothers will make us.

MIXED TUMORS OF THE PAROTID GLANDS*

By E. S. JUDD, M. D.

ROCHESTER, MINNESOTA

It has long been known that tumors of the salivary glands possess, as a rule, a peculiar morphology, which differs from that of tumors found in almost any other organ.

By far the greater number of tumors of the salivary glands are the so-called mixed tumors. These tumors are much more frequently found in the parotid than in the other salivary glands. These new growths contain a considerable vari-

ety of tissues, generally regarded to be of mesoblastic origin, such as cartilage, myxomatous tissue, fat, and lymphoid structures, while the parenchyma cells proper resemble, morphologically, either connective-tissue cells, in which case the tumors are considered as sarcomata, or endothelial cells, in which case the growths are classed as endotheliomata.

Because of the great variety of tissues which may be found in any of these tumors, it is difficult to make a classification. We consider the

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

following classification by Hanseman to be one of the simplest and best:

1. Endothelial carcinoma.
2. Endothelial sarcoma.
3. Endothelial carcino-sarcoma.
4. Endothelial tumors with development of special tissues.
5. Endothelial adenoma.*

When classified in this manner, all of the tumors are to be considered endotheliomata, with the predominating epithelial or connective-tissue cells as the index. It is seldom satisfactory to name one of these tumors and try to indicate each tissue in the name. His originated the term *endothelium* in 1865. Since then there has been a great deal of discussion among embryologists as to the derivation of endothelium: whether it is mesoblastic or hypoblastic, and also just which is endothelium and which is epithelial. Volkman is conceded to be the chief exponent of the endothelial theory in regard to these so-called mixed tumors. He regards them as endotheliomata, believing that, as the result of metaplasia, the stroma may become converted into tissues of different type, and that the columns of cells and gland-like tubules are formed by the proliferation of the endothelium lining the tissue spaces and lymph-vessels. Hisberg, Wilms, and Ribbert dispute this theory, believing that these tumors develop from displaced glandular *germinal* tissue, the stroma of which, because of the close relationship of the branchial arches, is capable of forming bone and cartilage. Wilms believes that these tumors develop from embryonal rests, consisting of epithelium and mesenchyme, which have remained latent for a long time.

In a description of endothelial tumors Volkman says: "The characteristic morphologic peculiarities of these tumors lie in the arrangement of the tumor cells in strands and tubules which distinguishes the growths from the sarcomata and gives them a close resemblance to carcinomata. The cells of the tumor are often in very close relationship with the connective tissue of the spaces in which the cells lie, as is evidenced by the fact that cells remain attached to the walls of the space and do not retract when the tumor is hardened in fixing fluids, as is usual in carcinoma. The cells of the endothelial tumors line the walls of the tissue spaces without the intervention of layers of normal en-

dothelial cells, such as is seen in carcinoma when metastases extend along lymph-spaces. The cartilage of the endothelial tumor arises from a fibrous connective-tissue stroma by softening of the intercellular substance, and the production is a myxomatous tissue which later develops cartilage and a homogenous intercellular tissue. Cell-masses of endothelial nature may also develop from the cartilaginous or myxomatous areas, and in many cases the spindle cells of the connective-tissue stroma may be regarded as genetically equivalent to the endothelial cells of the solid strands and tubules."

French observers have been inclined to class these tumors, when malignant, as carcinomata, the lesser malignant as adenomata, and, if the growth contains cartilage or bone-cells, as mixed tumors. The mixed tumors differ greatly from carcinomata in that there is no connection between the glandular structures, they are completely enclosed in a thick capsule and oftentimes lie some little distance from the gland substance.

Frequency of occurrence.—These neoplasms occur ten or eleven times in the parotid gland to once in the submaxillary gland; they very seldom occur in the sublingual. We have seen forty-one of these tumors in the parotid and four in the submaxillary gland, but none at all in the sublingual gland. It is interesting to note that no similar tumors have occurred in the pancreas.

General morphology.—There is no uniformity regarding either the nature or the origin of these tumors. They are generally encapsulated in a dense fibrous capsule, lobular, very fibrous, and very hard. One-fourth of all the tumors in cases reported contain cartilage. The firmness and hardness is probably due to the density of the tissue in the tumor, or to the extreme tension of the fibrous capsule; e. g., when the tumor reaches considerable size and the skin is drawn tightly over it. If the growth is less hard, it is usually an indication that it is highly cellular and probably very malignant.

In twenty-two of our forty-one cases the tumors were in the right parotid gland. Twenty-five of the patients were females.

Time of occurrence.—The majority of these tumors occurred in the second decade. The youngest patient in our series was fifteen years of age, and the oldest seventy-one years of age.

15 to 20 years of age.....	5 cases
21 to 31 years of age.....	7 cases

*The pathologic department of St. Mary's Hospital is at present engaged in an exhaustive study of these tumors with a view to their analysis and re-classification.

31 to 40 years of age.....	12 cases
41 to 50 years of age.....	9 cases
51 to 60 years of age.....	4 cases
61 to 71 years of age.....	4 cases

The average length of time in which the patient had the trouble before operation was eight years. A number of cases have been reported in which the tumor had been practically dormant for over fifty years. In our series one case appeared to be of one month's duration.

Cases with symptoms under 1 year.....	6
Cases with symptoms under 3 years.....	3
Cases with symptoms under 6 years.....	8
Cases with symptoms under 10 years.....	5
Cases with symptoms under 20 years.....	2
Cases with symptoms under 30 years.....	2

Relation of tumors to the surrounding structures.—These tumors may lie well encapsulated within the substance of the parotid gland. In other cases the capsule will not be very distinct, and the growth will infiltrate into the salivary gland. Usually, there is but one tumor, though they may be multiple and scattered throughout the substance of the gland. The encapsulated tumors may lie at some distance from the gland and not attached to it in any way, even by a pedicle of fibrous tissue.

Clinical course.—In articles written by Francis Carter Wood (*Annals of Surgery*, Jan. and Feb., 1904), it is estimated that twenty-five per cent of these tumors change to a malignant course, and that thirty per cent recur after operations. Four of his series of thirty-seven cases had internal metastasis or bone-invasion by extension. Dr. Wood advises operation even in the recurring cases. He says that frequently a thorough secondary operation will cure the patient.

One of these mixed tumors may grow slowly for a time, and then remain stationary for from twenty to thirty years, giving no special symptoms; then a sudden change may occur, the tumor will become rapidly malignant and destroy the life of an individual in a very short time, or from the start the tumor may grow rapidly malignant and destroy life within a few months. Microscopically, the structure of both varieties of tumors will be similar.

In the early part of their course these tumors will produce but few symptoms, which accounts for the length of time between the beginning of the trouble and the time when the patient seeks treatment. The fact that they remain dormant and of a certain size for a great many years

and then suddenly and rapidly increase their growth, would indicate the sudden giving way of the capsule of the tumor at some point, thus allowing the growth to extend. It is well known that, if in operating we only partially remove these tumors, in other words if we open these capsules and leave some of the cells behind, these cells will multiply and grow much more rapidly than they were doing before the interference. In connection with this, it is interesting to note that, if we remove these tumors while they are inactive, it will frequently be difficult to find evidences of malignancy; on the other hand, if the growth recurs, or if we remove a metastatic growth, the recurrence of metastatic growth is almost always the sarcomatous element. There may be no symptoms in these cases except the presence of the tumor, although in the later stages there may be symptoms of facial paralysis from pressure on the facial nerve, and partial deafness due to a narrowing of the auditory canal.

Diagnosis.—The diagnosis is based on the position of the tumor, the slow growth, its nodular form, uneven consistency, and encapsulation. A mixed tumor rapidly becoming malignant may be differentiated from sarcoma or carcinoma before its removal only by the history. If the tumor is small we must differentiate from a tuberculosis lymph-node, lipoma, or retention-cyst. Microscopically the neoplasm is characteristic: lobulated, mottled, soft, hard, solid, and cystic areas intermingled.

In the past five and one-half years we have operated upon forty-one cases of true mixed tumors of the parotid in the clinic at St. Mary's Hospital. In nine of these cases the endothelial element predominated, five were sarcomatous, three were mixed-cell tumors undergoing sarcomatous change, and three were mixed tumors undergoing endotheliomatous change. Ten of these patients came to us with recurring growths, or they had recurrences following our operations.

Twenty-seven of the forty-one patients have recently been heard from: twenty-four of them state that they are perfectly well, and three of them say they have a local recurrence. Two of the three had predominating sarcomatous elements at the time of operation; one, a man seventy years of age, had had a tumor for thirty years, with a history of rapid growth during the last three months. This patient died, evidently of metastasis.

The endeavor to preserve all of the fibers of

the seventh nerve, may be said to be the cause of most of the recurrences following the removal of mixed tumors of the parotid gland. If we could deliberately excise the tumor with as much of the parotid as we deemed wise, there would be no recurrences in the early cases, but as long as these tumors are not severely malignant in the beginning it is a question whether we are justified in sacrificing the facial nerve.

In the encapsulated cases it has been our custom to completely excise the tumor with the capsule, and to pack the entire wound with gauze saturated with a caustic (Harrington's solution), in order that the raw surfaces may be seared to prevent the grafting of any cells. We have not found it necessary to remove any of the lymphatics if the growth is well encapsulated, and we have not observed that these tumors involve the lymphatics until very late in their development. On the other hand, if the disease is extending into the parotid and into the surrounding lymphatics, we have excised the parotid entirely, and with it the adjoining lymphatics. In these cases we disregard the facial nerve. In a few of our cases the tumor was very large, pressing into the mouth and throat, and causing considerable dysphagia and interference in swallowing. In these cases, in addition to the removal of the parotid gland, it was necessary to sacrifice the external artery and the internal jugular vein.

I believe the important factors in the treatment of these cases are, to get the case early, while the tumor is still encapsulated, and at that time to remove the growth thoroughly with all of its capsule. J

DISCUSSION

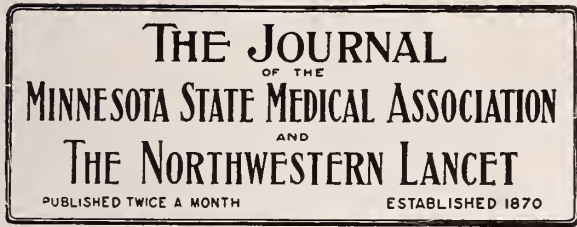
Dr. W. A. Dennis (St. Paul): There is little to add to what Dr. Judd has already said. I have had an opportunity to study four of these cases. The first one was operated on in 1893, and some seven or eight years after that there was some recurrence, which was cauterized, and when it came to me three or four years ago the growth had recurred and had involved the surrounding parts very extensively. It had invaded the seventh nerve, causing complete paralysis of the left side of the face. That left the work comparatively simple. I simply dissected out the whole thing, taking all the tissue involved, and in four weeks I was able to graft. This man returned this summer with a slight return of the trouble, which I dissected out and followed with the x-ray

treatment. This shows the slow course of these tumors. This last summer I had a second case of the same type which I first operated on, thinking it was a lymph node in the parotid region. This also was removed in toto. This case is well to date. Another case I have seen and not operated on which the man had had a great many years. A third case we operated on several years ago; and in that case I am not sure whether it was a mixed tumor. It looked like a bunch of grapes growing outward and downward and had a fatty appearance. The woman at this time is entirely well.

Dr. L. B. Wilson (Rochester): In one respect it is quibbling to call these mixed tumors, and in another it is quibbling to call them endotheliomata. It but mixes the nomenclature. A year ago in going over the so-called "mixed tumors" of the kidney I was convinced we were dealing with tumors which had developed from portions of the renal blastema which had never become connected with the divisions of renal pelvis. We used to think the kidney was developed from the Wolffian duct, but now we find that this is not true, but that we are dealing with a development from the mesothelium. We find the parotid is developed much as the kidney is developed and we may expect to find developing from the mesoderm in connection with the parotid the same elements we find in a "mixed tumor" (mesothelioma) of the kidney. This is hypothesis, but it best explains all these mixed tumors of the kidney and parotid. Whatever you call them, they are tumors derived from mesothelium of the embryo.

"CARRIERS" IN RELATION TO THE SPREAD OF DIPHTHERIA

Eben C. Hill, U. S. Army, describes an epidemic of diphtheria occurring in an isolated army post, in which the first case occurred in a man employed in the meat shop where all meats for the post were bought. This man was sick with nasal diphtheria for some three weeks before his case was diagnosed by culture. The second case was in a boy who had frequently been to this market. From these developed a number of other typical cases and many well carriers of the bacilli were discovered by cultures. These were at once isolated until free from germs. All were immunized with 1,000 units of antitoxin, including the infants, and no bad effects were observed. At the close of the epidemic no disinfection of houses was done, yet no further spread occurred. This epidemic emphasizes the fact that it is the carriers and undiagnosed cases that spread the disease, and not clothing and other fomites.—*Medical Record*, June 10, 1911.



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PUBLICATION COMMITTEE OF THE COUNCIL
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St. Paul St. Paul
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Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

June 15, 1911

MRS. MAY WRIGHT SEWALL

Some years ago, ten or twelve perhaps, at a meeting of the Association for Public Health at Indianapolis, Mrs. May Sewall delivered an address that was looked upon as very commendatory, in which she spoke of her relation to the medical profession and her vivid interest in public-health measures.

She came to the Twin Cities last week, with a different set of ideas. Formerly Mrs. Sewall was a sharp-witted and convincing talker, but her appearance last week showed her advancing years and evidently a change of attitude and cerebration. In Minneapolis she talked on "Medical Mediævalism," and for more than half an hour discussed the development of religion from ancient times to the present. She finally approached the subject of her address,—that of medical evolution,—and it must be said, in all fairness to Mrs. Sewall, that she gave the doctors much praise for their progress during the centuries and for the rapid advancement which they had made within the past ten years. She herself came from, and was intimately connected with, doctors for one or two generations back and hence could speak authoritatively on the devotion, the arduous labor, and the earnestness and sincerity of the physician's life. Then she began her attack upon the medical men of today who are employed by the government. She said

that seven thousand physicians are employed in the army and navy and various other governmental departments, and that they all belong to one school, and that they are attempting to form an alliance for their perpetuation.

She spoke of the American Medical Association and its political factors and factions which, she claimed, point to their evident desire to control the practice of medicine in the United States.

She discussed the various bills which have been introduced in Congress and the various state legislative bodies, and said she had looked over more than one hundred such bills. One could only infer from her remarks that doctors are trying to introduce medical measures which will advance the regular school and deface all other schools of healing. It was evident from her address, and particularly from her manner of attack, that she is in the employ of the League of Medical Freedom, and one perhaps can excuse her change of views in ten years by using the same argument that she has used,—that all sciences are progressive and that only the lame lag behind.

She spoke of school-inspection and limited her arguments to the methods in Boston. She used no special point for illustration, but ridiculed the whole system and impressed her audience with the idea that all school-inspection is for specialists and their work is for their own financial advancement. She limited her talk to oculists, dentists, and nose and throat specialists. She said nothing about communicable diseases, and particularly mentioned the fact that medical inspection would become compulsory and following that there would be compulsory medication. All that she said of school-inspection must have been based upon hearsay from some old woman who did not believe in inspection of any kind, for Mrs. Sewall evidently has never read even the elementary books published on school-inspection. She knows so little on the subject that it was painful to hear her sneer and ridicule and make light of a serious matter.

She nearly forgot the League of Medical Freedom, for she had wandered into such a by-path in trying to be funny that the question of medical freedom was simply injected, from time to time, into her subject. She prayed for religion and freedom, and she hoped for medical freedom. During the entire hour and a half that she spoke she presented absolutely no arguments that were convincing or that were based upon anything but hearsay.

It is very unfortunate that she has not been able to see that she is not qualified to talk upon anything relating to medical matters. If the League of Medical Freedom is sending out this kind of lecturers, it is doing its cause more harm than good.

The audience was composed largely of women, a few scattering laymen and at least three physicians. A great many Christian Scientists were present, and they must have been greatly disappointed to hear Mrs. Sewall's praise for the doctor and his advancement.

THE LEAGUE OF MEDICAL FREEDOM

The following is an editorial from Collier's Weekly of June 3d, and is a very good example of the thoroughness with which Collier's points to national defects.

LIBERTY

Protests from readers have greeted our criticism of the League for Medical Freedom. Also a protest is telegraphed from the California branch of the league. In the minds of most of those who protest, the principal objections are to the following positions taken by us: 1. That the league contains the kind of men who opposed the Pure Food Act. 2. That the activities of the league are against public welfare and frequently surreptitious. Our answer follows:

1. B. O. Flower, one of the nine founders of the league, and now in his second term as president of it, was president of "The R. C. Flower Medicine Company" from 1885 to 1899. R. C. Flower is the notorious quack and general humbug whose latest arrest was as late as 1908. B. O. Flower wrote the league's pamphlets on "Bubonic Plague" and "The Compulsory Medical Inspection of School Children." His views on patent medicine are often expressed. For instance:

I believe that a great majority of the proprietary medicines are infinitely less dangerous to the public than the majority of regular doctors' prescriptions.

2. C. W. Miller, second vice-president of the league, was also one of the founders. In his newspaper, which publishes patent medicine advertising, he has constantly fought the medical profession. Last year one of his addresses against what he calls a "doctors' trust" was delivered to the Dairy Association in Baltimore. We may say in passing that Collier's does not believe in freedom to sell tuberculous milk any more than it does in freedom to sell tuberculous meat.

3. Mrs. Diana Belais, a director and also a founder, has appeared before in this paper as president of an anti-experiment society, a well-meaning, ignorant, reckless, and muddle-headed agitator. We are officially informed by the chairman of the "committee on publicity and education" of the league that Mrs. Belais was made a director "because of her courageous efforts to secure a higher law in New York State than the doctors' cruel theories and professional arrogance." Here's to anti-experiment, meningitis, diphtheria, and freedom!

4. Dr. C. S. Carr, who is on the advisory board, edits a pseudo-medical sheet. Collier's long ago printed

a letter signed "The Peruna Drug Company, per Carr." As editor of "Medical Talk for the Home," he carried advertisements of many of the medicines exposed in Collier's in our series on "The Great American Fraud." He is now editor of the Columbus "Medical Journal," which he at once turned from an ethical sheet into a sheer fraud. Look at the issue of May, 1909. On the front cover is a picture of Carr himself writing: "All drugs are poison. All druggists are poisoners." On the reverse side is an advertisement beginning: "Prescribe Antikamnia and Codeine tables in la grippe, headaches, etc." Hurrah for freedom and Peruna!

5. George P. Englehard, who is on the advisory board, has for a long time in his journals defended the patent-medicine interests.

6. Charles Huhn, also a member of the board, is a prominent officer in a co-operative patent-medicine concern.

7. Another founder was a member of the advertising agency which is now spending for the league the money which it puts into its advertising campaigns.

The league says it did not oppose any "sanitary or quarantine laws." This statement requires some hardihood, as the hearings of the Senate Committee on Health, and more especially of the House Committee on Foreign and Interstate Commerce, show. It would interest us to know whether the league can point out a single health bill introduced in Congress which it has not opposed. When the leaders wish to oppose a sanitary or quarantine law they do it on the ground that such a law would *indirectly* "lead to compulsory and discriminatory legislation."

The league was nominally born recently, but those who make it up had already as individuals, and even as organizations (such as the Colorado League for Medical Liberty) opposed State and National legislation. A pamphlet published by the Colorado branch singles out Collier's for attack, and was written by a notorious quack doctor. In California, which was the special theme of our former editorial, if the league should prevail, the next threat of bubonic plague would be carried out, instead of being suppressed like the last; smallpox might again become a serious epidemic; school children would bear their ills as best they might. A bill was introduced ordering that the Board of Health be composed of two "allopaths" (a school which does not exist but is a hostile term for regular physicians, two homeopaths, two "eclectics," two osteopaths. It did not pass!

Some leading homeopaths and osteopaths, be it said, are in favor of a national health bureau and strongly against the agitations of the league. Dr. Francis B. Kellogg, president of the California State Homeopathic Society, in an address recently said: "... In my opinion there is an effort being made to exploit the homeopathic profession by influences and interests which are indirectly but radically opposed to the welfare not only of practitioners of medicine in general, but to that of humanity itself. I refer to the effort to enlist homeopathic support for the so-called National League for Medical Freedom."

Plato complained that in his day doctors made too sharp a distinction between the body and the mind. In our day the best class of physicians frequently recommend faith cure and Christian Science, and the Emanuel movement is an indication that it is possible for science and religion to work together in healing. Few

mere observers rate the benefits that Christian Science has brought to the community more highly than we do. A belief which so frequently brings about an actual improvement in character, disposition, bodily health, and mental atmosphere, deserves the most serious recognition, even by those who regret its hostility to the progressive science of medicine. It is possible, at times, for clever designers to use members of any faith for disastrous purposes. When R. C. Flower was at the height of his career, in 1907, as manufacturer of diamonds, vender of fake mining stock, wearer of most ingenious disguises, traveler under assumed names, and general artist in gold bricks, he conceived the idea of playing for profit upon the earnest beliefs of the followers of Mrs. Eddy. One of his accomplices, a woman, who also used an assumed name, worked the game with him, and when Dr. Flower, alias Mr. Cortland, took up the cudgels in defense of Christian Science, without being requested to do so, he said:

Not that I am one of its disciples, but I like to see every one *free to practise medicine as he wishes*.

Here we have the very words themselves from old Doc Flower. Up with freedom!

Everybody who believes in "freedom" in medicine is within his natural and political rights in supporting this league. Collier's, not believing in this species of "freedom," is also within its rights in treating the league as a menace, the make-up, bias, and purpose of which ought to be fully understood.

This editorial is published because of the special interest it has for medical men, and in order that they may familiarize their patients and friends with the makeup of the League of Medical Freedom. It has been understood for some time that the League of Medical Freedom has interfered with national and state legislation, relative to medical subjects which are introduced for the benefit of the public health; and in order that the reader may understand who is at the head of the League a careful perusal of its list of officers will make it clear that the purpose of the League is destructive rather than constructive; at least, if not destructive, it tends to halt advances, improvement, and reforms.

The information contained in this editorial is a matter of common knowledge, not only in newspaper offices, but among medical men, and, although the information may not be strictly up to date, it is a fair example of what the League was and what its tendencies are.

THE SPECTATOR

Today I was watching two Japanese babies at play, little black-haired, black-eyed, brown-faced heathen, both fresh from the Orient and both playing, chattering, and giggling just like the babies of the Occident. All the baby ways

that you see in your little folk they had as perfectly as though they had been brought up in your family. I noticed that their parents jollied them just as American parents do their babies, and seemingly thought that no children on earth were quite as fine as theirs. It would not have been hard to persuade me this morning that all babies are born free and equal. There are those who deny this as a general proposition; but most babies affirm it.

The first great joy of life for most people is to sit on high and look down on the bald spot of the rest of the race. The way we accomplish this in America is to pile up a heap of negotiable stuff and climb on top of it. In certain older countries like England and Germany they climb up into the family tree, and from a perch on a high limb look down on the commons. In certain parts of the Philippine Islands the high seat is a pile of well-smoked human heads heaped up in front of the hut. The breech-clouted scoundrel who sits on this seat thinks glory to himself for having got ahead of his neighbors in this way. Some criminals have mounted the scaffold with joy, glad thus to get up in the world. Few men have fallen so low that they cannot look down on some lower fellow.

Pride of place, pride of birth, pride of accomplishment, pride of profession, are all worthy pride if the place is honorable, the birth noble, the accomplishment beneficent, the profession well practiced. Once a man bought a seat in the United States Senate, but it didn't lift him so you could notice it much. Once on a time a man high up in the Ancient Order of the Sons of Great Guns looked up to find a horse-thief hanging by the neck to a dead limb far up in his family tree. A man of my acquaintance who had piled up a large wad, and from the top of it couldn't see you even with a telescope, was found by the detectives to be sitting on a pile of Uncle Sam's stolen timber. I was once in a province where the wife of the village doctor could not exchange visiting-cards at par with the wife of any other citizen except the dominie, the barrister, and the school principal. Trades-people could trade social amenities with these professional ladies only at a large discount. This made for inconvenience and ill-will all round the town.

The distinctions of race are said to be made by the Almighty with the direct intent that one race shall be inferior to another and serve the superior race. That God made me white and Sam

Jones black does not prove that God loves white better than black, or yellow, or brown. As a matter of presumable fact our Savior when on earth wore a skin that was some shades darker than we would like to wear. So it is not certain that God loves white better than brown. Pride of color therefore is an artificial pride.

There are things that prove us to have been born equal. Sickness is one of the proofs. Sickness is a great leveler. A toplofty millionairess will make the same kind of a fuss over the stomachache that her washerwoman does. The same kind of medicine will generally cure both. The same doctor will probably be called to help both, and the fact that he has cured the washerwoman will not trouble the rich lady if she is sick enough to be in her senses. The very rich man has this little advantage over the very poor one, that he can pile up a lot of polished stone in the cemetery and cut his name on it in very large and very deep letters. The poor man will have to be content with something cheap and small. His name will wash off his stone, but who reads names on tombstones? And how much comfort to the dead is a big rock pile? How good does forty tons of granite look to a sick man? And is heaven any nearer to the man holding a warranty deed to a seventeen-story building than it may be to the janitor of the same building.

If babies are not born equal, certain it is that human dust looks to be homogeneous. If there is any heaven-made distinction in the rank of mortals it must be aside from the mortal part of them.

REPORTS OF SOCIETIES'

JACKSON COUNTY SOCIETY

The Society held a regular semi-annual meeting at Heron Lake on May 16th, with eight members and three visiting physicians present.

The following papers were read: "A Surgical Case," by Dr. Anton Moe, Heron Lake; "The Early Diagnosis of Tuberculosis," by Dr. R. W. Allen, Heron Lake; "Advantages of Post-graduate Work in Our American Hospitals, with Report of Cases Seen," by Dr. H. L. Artz, Jackson; "Experiences in Country Practice with an Automobile," by Dr. Iver S. Johnson, Jackson.

The next meeting will be held at Jackson the second Wednesday in November.

IVER S. BENSON, M. D., Secretary.

STEARNS-BENTON COUNTY SOCIETY

The Society met at St. Cloud on May 16th with eight members present.

Papers were read as follows: "X-Ray Diagnosis," by Dr. Max J. Kern, St. Cloud; "X-Ray Therapeutics," by Dr. J. C. Boehm, St. Cloud; "A Case of Phosphorus Poisoning," by Dr. G. E. Putney, Paynesville.

Following the reading of the papers a thorough discussion followed, and a vote of thanks was extended the authors of the papers. The Society adjourned for the summer months subject to the call of the Program Committee.

J. C. BOEHM, M. D., Secretary.

NEWS ITEMS

Dr. F. A. Pringle, of Northfield, has gone to Europe.

Dr. T. W. Collinson, of Culbertson, Mont., was married last month.

Dr. C. W. Driesbach, of Minneapolis, has located at Timber Lake, S. D.

Dr. C. N. Brooks has resigned the office of assistant city physician of St. Paul.

Dr. LeRoy H. Labbitt, of Enderlin, N. D., is doing post-graduate work in Chicago.

The Catholics will erect a hospital building at Dickinson, N. D., to cost about \$8,000.

The Barclay Hospital of Cloquet is being enlarged by a two-story concrete addition.

The City and County Hospital of St. Paul graduated twenty-five nurses last month.

Seven Rochester physicians are on the program of the A. M. A. meeting next week.

The Northwestern District Medical Association of North Dakota met at Minot last month.

Contracts amounting to nearly \$40,000 have been let for the St. Louis County Sanitarium.

Drs. W. J. Mayo and Christopher Graham, of Rochester, have returned from their European trip.

Dr. A. G. Chadbourn, of Red Lake Falls, has gone to Boston to do post-graduate work at Harvard.

Fifteen nurses were graduated from the Rochester State Hospital at the recent commencement.

Dr. Theodore Bratrud, of Warren, has been doing post-graduate work at Baltimore and Washington.

Dr. Albert Plummer, of Racine, has moved to Rochester, and will be connected with St. Mary's Hospital.

Dr. H. J. Barton, of Watertown, S. D., was married last month to Miss Mary E. Harrigan, of the same place.

The hospital building which Dr. George G. Eitel is erecting in Minneapolis, is rapidly approaching completion.

Dr. A. J. Movius, of Bridger, Mont., has returned from Chicago where he has been doing post-graduate work.

Mrs. A. R. Colvin, of St. Paul, was elected vice-president of the Nurses Association Alumnae of the United States, which met in Boston the first days of June.

The usual delays have befallen the beautiful hospital being erected for Dr. Abbott in Minneapolis, and the opening cannot take place before some time next month.

Dr. Olof Bentzen, who recently located in Rugby, N. D., has returned to Grand Forks, where he formerly practiced.

Dr. T. W. Moffitt, of Deadwood, S. D., has taken as associate Dr. Childs, a recent graduate of the University of Michigan.

The new hospital at Spooner is ready for occupancy. It is a great credit to the new section of Minnesota in which it is built.

The new building of Barnes County Hospital at Valley City, N. D., will soon be completed and will represent an outlay of \$35,000.

Dr. C. E. Lommen and wife, of Mayville, N. D., are rejoicing over a prospective assistant for the doctor. He was born June 2d.

Dr. Peter Follman, the oldest physician of Mankato, and one of the pioneers of the Northwest, died last month at the age of 75 years.

Dr. P. H. Mee, of Gaylord, has moved to Osseo. Dr. Mee is a graduate of the State University, and has been practicing at Gaylord for four years.

The Minnesota Academy of Ophthalmology and Otolaryngology met in St. Paul last month. A number of physicians outside of the Twin Cities were present.

Dr. H. J. Thornby, of Pelican Rapids, has purchased the practice of Dr. F. H. Alexander, of Barnesville. Dr. Alexander has not decided where he will locate.

Work has begun on the hospital building at Havre, Mont. The building will be handsome

and commodious, and the hospital will be first-class in every particular.

A magnetic healer of Grand Forks, N. D., has announced his intention of testing the medical-practice act passed at the last session of the N. D. legislature, and known as H. B. 100.

Dr. D. Kalinoff and Miss Alice Pennington, of Stillwater, were married on June 8th. They will spend several months in Germany where Dr. Kalinoff will do post-graduate work.

The committee of medical education of the Illinois State Medical Association says there are thirteen medical schools in Chicago which "have no moral or legal right to teach medicine."

Dr. Irving A. Preine, a recent graduate of the State University, and an interne at the City Hospital for the past fifteen months, has opened an office in Minneapolis, at 328 Central Ave.

At the annual meeting of the Minnesota State Homeopathic Institute it was decided "to establish a propaganda for the encouragement of homeopathy, and to create a fund for that purpose."

Dr. W. W. Lewis, of St. Paul, has gone to Europe for special study of the eye, ear, nose, and throat. He will spend two years abroad. Dr. Quinn will take care of his practice during this time.

The Women's Auxiliary of the Hennepin County Medical Society has undertaken to assist needy patients leaving Hopewell Hospital (for tubercular patients) until they can become self-supporting.

Drs. A. R. Colvin and Harry P. Ritchie, of St. Paul, and Dr. A. C. Strachauer, of Minneapolis, have received appointments in the Medical Reserve Corps of the U. S. Army, ranking as first lieutenants.

No other city in the Northwest has been more persistent than the city of Albert Lea in the search for a hospital, and now the Albert Lea Hospital is at last under way, and it will be one for the city to be proud of.

A bill has been introduced into the Wisconsin senate making it a felony for any person "to pretend or attempt to diagnose the condition of a person as to health," regardless of the remuneration received for such services.

The Lutherans will build a hospital at Dayton's Bluff in St. Paul. The Gustav Willius residence has been purchased for temporary use, and this will be converted into a nurses' home when the new building is completed.

Dr. Edwin Phillips, who had practiced in Minneapolis over forty years, died on May 31st at the age of 78 years. Dr. Phillips stood high in the early profession of Minnesota, and took a prominent part in advancing all professional interests.

Dr. Martin Kranz, of Mandan, N. D., has gone to Vienna for special study in internal medicine. He will be absent between four and five months. Dr. T. W. DeSautelle, a recent graduate of Johns Hopkins, will have charge of Dr. Kranz's practice.

Dr. T. F. Rodwell, of Cass Lake, who has long been in charge of the reservation Indians in Minnesota, asserts that over 50 per cent of the 11,000 now in the state have tuberculosis. Dr. Rodwell is greatly interested in the sanitarium to be built for them.

Dr. A. L. McDonald, who has been an instructor in the medical department of the University of North Dakota for the past seven years, or since the beginning of medical work in the University, has resigned. He was given a banquet at Grand Forks last month by the members of Gamma Phi.

FOR SALE—COPIES OF PROF. KNOPF'S PRIZE ESSAY
ON TUBERCULOSIS

Authorized Norwegian-Danish translation, with an introduction by Prof. Saugman of Denmark; 96 pages; illustrated. Price, 1 copy by mail, 12 cents; 12 copies, freight or express, \$1.

Address the translator, Dr. A. C. Amundson, Cambridge, Wis.

GRADUATES IN MEDICINE FROM THE
UNIVERSITY OF MINNESOTA, 1911

Francis W. Anderson, Dickinson, N. D.

Moses Barron, St. Paul.

Robert Russell Craig, Willow Range, Minn.

William John Dailey, St. Paul.

Karl Dedolph, St. Paul.

Philip Randall Fulton, Hudson, Wis.

George Arthur Geist, St. Paul.

Charles Joseph Goodheart, Graceville.

Louis Henry Hedenstrom, St. Paul.

William Howard Hengstler, Willmar.

Paul Harold Kelly, St. Paul.

Walter John Kremer, Cold Springs.

Chandler C. Larkin, Minneapolis.

Antoine A. Laurent, Minneapolis.

Archibald Leitch, St. Paul.

Whiting B. Mitchell, Chehalis, Wash.

Charles A. Olson, St. Paul.

James Wenceslas Papez, Minneapolis.

Erhard A. Rumreich, Pisek, N. D.

Magnus B. Ruud, Fosston.

Arthur M. Wooster, Minneapolis.

Nicholas William Schumacher, Minneapolis.

Albert E. Spear, Ft. Worth, Texas.

Dale D. Turnacliiff, Waseca.

Thomas Ziskin, Minneapolis.

BOOKS AND INSTRUMENTS FOR SALE

Books (Homeopathic), instruments, operating-table, nine pairs of tooth forceps, red cross dry-cell battery, etc., of the late Dr. C. L. Gates, are for sale. Address Mrs. Hattie E. Gates, Hancock, Stearns Co., Minn.

PRACTICE FOR SALE

A \$4,000 practice in a Minnesota city of 6,000 people, is offered for sale, together with the seller's office furniture, for \$1,200 cash. Good schools, hospital facilities, and a prosperous people—no bad accounts. Must sell before June 1st, or offer will be withdrawn. Address O. C., care of this office.

HOSPITAL FOR SALE

The Dr. Ray Humiston Hospital, at Worthington, Minn., is offered for sale on account of Dr. Humiston's death. Hospital is modern and fully equipped. For particular, address Mrs. Ray Humiston, Worthington, Minn.

PHYSICIAN WANTED

A competent physician is wanted to locate at Gaylord, Minn. For full particulars inquire of or write Dr. D. N. Jones, Gaylord, Minn.

REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

[illegible]

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1916	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	2	1	1	2	1	1	1	1	1	1	1	1	1	1
Aitkin	1,719	1,638	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Akeley	1,184	1,221	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Appleton	1,121	1,204	3	1	1	1	1	1	1	1	1	1	1	1	1	1
Belle Plaine	721	1,058	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Bovey	1,040	1,227	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Browns Valley	1,175	1,372	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Buffalo	546	2,011	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Caledonia	7,684	7,684	7	1	1	2	1	1	1	1	1	1	1	1	1	1
Cass Lake	1,613	1,613	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chisholm	962	1,318	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Coleraine	967	1,031	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Dawson	733	1,024	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Delano	864	1,055	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Farmington	1,000	1,645	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Fosston	1,116	2,161	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Frazee	1,428	2,239	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Glenwood	2,481	8,832	21	2	6	1	1	1	1	1	1	1	1	1	1	1
Grand Rapids	1,487	1,487	*	1	1	1	1	1	1	1	1	1	1	1	1	1
Hibbing	1,756	1,907	3	1	1	1	1	1	1	1	1	1	1	1	1	1
International Falls	1,254	1,173	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jackson	1,202	1,237	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Janesville	1,215	1,038	3	1	1	1	1	1	1	1	1	1	1	1	1	1
Kenyon	1,385	1,250	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lake Crystal	1,272	1,273	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Long Prairie	1,204	1,102	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Madelia	959	1,081	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Milaca	2,080	2,080	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Mountain Lake	939	1,279	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Nashwauk	1,110	1,404	1	1	1	1	1	1	1	1	1	1	1	1	1	1
North Mankato	917	1,013	2	1	1	1	1	1	1	1	1	1	1	1	1	1
North St. Paul	1,313	1,850	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Osakis	1,033	1,019	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Park Rapids	1,182	1,376	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Pelican Rapids	993	1,258	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Perham	1,038	1,175	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pine City	1,278	1,193	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Plainview	1,319	1,555	*	1	1	1	1	1	1	1	1	1	1	1	1	1
Preston	1,325	1,743	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Princeton	1,189	1,818	1	1	1	1	1	1	1	1	1	1	1	1	1	1
St. Louis Park	1,391	1,745	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Sandstone	1,422	1,343	3	1	1	1	1	1	1	1	1	1	1	1	1	1
Sauk Rapids	1,511	1,482	3	1	1	1	1	1	1	1	1	1	1	1	1	1
South Stillwater	1,770	1,817	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Springfield	1,520	1,820	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Spring Valley	2,017	1,755	*	1	1	1	1	1	1	1	1	1	1	1	1	1
Wadena	2,250	3,022	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wells	134	1,121	0	1	1	1	1	1	1	1	1	1	1	1	1	1
West Minneapolis	1,132	1,300	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Whalan	1,288	1,505	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wheaton	1,816	2,555	1	1	1	1	1	1	1	1	1	1	1	1	1	1
White Bear Lake	1,119	1,138	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Winnebago City																
Zumbrota																
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			18	5	1	1	1	1	1	1	1	1	1	1	1	1
Rochester, Hospital for Insane			12	1	1	1	1	1	1	1	1	1	1	1	1	1
St. Peter, Hospital for Insane			9	3	1	1	1	1	1	1	1	1	1	1	1	1
Anoka, Asylum			3	2	1	1	1	1	1	1	1	1	1	1	1	1
Hastings, Asylum			1	1	1	1	1	1	1	1	1	1	1	1	1	1
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			7	4	2	1	1	1	1	1	1	1	1	1	1	1
Owatonna, School for Dependents																
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			4													
OTHER PARTS OF STATE			877	73	12	120	15	18	11	....	8	3	6	52	44	6
Total for state			2007	209	34	248	33	31	17	1	17	5	25	82	109	14

*No report received. Registrar not doing his duty.

159 stillbirths and premature births not included in above totals.

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Complete Furnishers of Homes, Offices, Hotels,
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MINNEAPOLIS

WE HAVE TAKEN SPECIAL PAINS THIS SEASON WITH OUR SELECTIONS OF SUMMER FURNISHINGS. Our steadily increasing business in Summer Furnishings in Specialized Departments has enabled us to secure the Exclusive Sale of Some Exceedingly Meritorious Merchandise, including the Beautiful, Artistic and Durable "Kaltex" Furniture, Superior in Appearance and Wearing Qualities to either Rattan, Willow or Fibre; also some Novelties in Mattings for Floor Coverings never before seen in Minneapolis; a Charming Assortment of Fabrics and Curtains for Summer Window Treatments; the Deservedly Popular "Vudor" Porch Shades; a Splendid Assortment of Lawn Swings, Hammocks, Settees, Swinging Couches, Veranda Chairs and Tables, together with Conveniences and Comforts for the Dining Room, and its important adjunct, the Kitchen, of Proven Merit.

WE WOULD CALL PARTICULAR ATTENTION TO OUR LINE OF REFRIGERATORS, including the Reputable "Bobb" Syphon System and other Refrigerators manufactured by The White Enamel Refrigerator Co.; also All Meritorious Makes of Lawn Hose, Sprinklers, Lawn Mowers. In fact, Everything to make the Summer Enjoyable and Comfortable, whether it be for the Inside or the Outside of the House, and whether the House be a Modest Cottage, Bungalow or something more pretentious.

OUR EQUIPMENT OF AUTOMOBILES FOR LAKE DELIVERY SERVICE has been augmented and, take it all in all, we are in the best of shape to take care of the Seasonable Needs of our Customers.

PUBLISHER'S DEPARTMENT

THE PEERLESS FOR 1912

The day of the cheap car has gone by, at least for physicians who have learned how dearly they pay for their efforts to get service below cost. Nothing is too good for men who go on the mission of the physician, provided the higher cost represents efficiency in the machine.

The Peerless automobile has demonstrated its right to the name it bears, for it is indeed a *peerless* machine. It has beauty of lines, it gives comfort to owner, and it shows an efficiency that has not yet been surpassed in motor cars.

The models for 1912 give three six-cylinder machines of 38, 48 and 60 horsepower respectively, and four-cylinder machine of 40 horsepower. Simplicity marks every feature of the machinery, while lightness with strength has been carried to the safest limit.

The bodies are made in all styles, and are in no respect inferior to the chassis.

T. M. Anderson, of Minneapolis, is the Northwestern agent of these cars, and his announcement appears on another page.

TETANUS ANTITOXIN

Special attention is called to the announcement of the Mulford Company on our third cover page. Every

reader of this paper may soon need the information given in that announcement, and it is well to read it at once, for the report given therein is interesting and may become invaluable. The record of tetanus antitoxin is unsurpassed by any of the antitoxins, and the physician who is not prepared to use it may miss a golden opportunity to save life and to increase his own usefulness.

CREAM OF BARLEY

Heretofore physicians familiar with the nutritional and therapeutic value of barley have had difficulty in procuring a satisfactory flour. Barley water, a most useful demulcent and diuretic beverage indicated in many renal and all febrile affections, has been perforce made from an indifferent quality of pearl barley or from an imported flour. The latter has been also the only available barley food for infants and invalids.

The Minne-Paul Milling Co. has recently perfected processes which produce a perfect flour from the finest American barley (and no better grain grows) and now market their product in one pound cans as "Johnson's Barley Flour." Chemical and clinical tests prove this flour to contain all the nutritive elements of prime barley and infants will thrive on gruel or barley water made from it when nothing else will be retained by their disordered stomachs. To people of limited means the cost of the various infants' foods favored by practitioners is a serious matter: Johnson's Barley flour is among the most nourishing and easily assimilated foods available and is not expensive. Children fed

upon it grow fat rapidly. In infantile diarrheas and dysentery barley gruel is the most satisfactory nutrient. The writer has frequently sustained infants suffering from gastroenteritis upon this food alone for a week or ten days gradually adding milk as the conditions improved. Marasmic children will almost invariably improve upon a barley diet. In fact barley is generally acknowledged to be a more desirable cereal than the oat but it is milled with difficulty and a perfect flour has not hitherto been produced. The Minneapolis Milling Co. are also marketing a most delicious and nutritious breakfast food—Cream of Barley. Physicians will undoubtedly recommend its general use. Samples of Barley Flour will be supplied to practitioners willing to pay mail or express charges.—*American Journal of Clinical Medicine*, May, 1911.

AN IMPROVED HYDRATED MAGNESIA

An agent which undoubtedly deserves to be more widely employed than it is at present is magnesium oxide. While long held in high professional favor, many physicians in the past have refrained from prescribing it because of the many faulty preparations which found their way upon the market. Practitioners who have felt this restraint would do well to make a test of Milk of Magnesia, P. D. & Co., an improved hydrated magnesia which lacks the objectionable features of many similar preparations and which may be depended upon for uniform and certain results.

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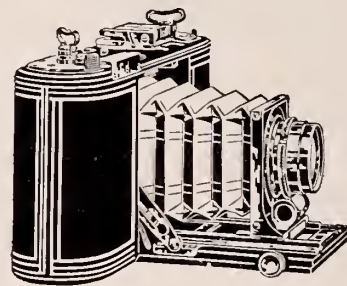
gastralgia, cructation, pyrosis and other manifestations of hyperacidity. It is pleasant to take, being readily accepted by children and persons of fastidious taste.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, JULY 1, 1911

No. 13

VENOUS ANESTHESIA*

Absolute local anesthesia of the entire upper or lower extremity, or portion thereof, permitting of all surgical procedures performed on these parts, including resections and amputations.

By A. C. STRACHAUER, M. D.

Associate Surgeon, State University Hospital
MINNEAPOLIS

Local anesthesia has been developed to a fine art in Germany. One-third of all the surgery performed under general anesthesia in this country would there be accomplished under absolute local anesthesia. Absolute anesthesia is perfect anesthesia, and not a partial amelioration or obtunding of pain.

The greatest recent advance made in this field is venous anesthesia, evolved by the surgeon August Bier, of Berlin. Absolute local anesthesia of the entire upper or lower extremity is obtainable by this method, permitting of all of the surgery performed on these parts, and as such is a life-saving procedure in imperative surgery in which general anesthesia is absolutely contra-indicated, due to the presence of shock, cardiac, renal, pulmonary, diabetic, or blood conditions, and general enfeeblement, all of which are the indications for the use of venous anesthesia.

Direct anesthesia is a terminal anesthesia due to a direct anesthetizing of the end-organs of the anesthetized tissues.

Indirect anesthesia is an anesthesia of tissues produced by a "nerve-blocking" or "physiologic section" of the nerves supplying the so anesthetized zone at a site central to such tissues, the nerves and organs of which remain intact.

Direct superficial anesthesia, that is, absolute local anesthesia, of the skin, fascia, and superficial tissues, is easily obtainable in a limited area by the proper direct injection of weak anesthetic

solutions into such tissues and its confinement there by the addition of adrenalin to the solution, or, mechanically, by the use of constricting rubber bandages or pressure-rings. This result is produced by the anesthetization of the end-organs, which are everywhere highly susceptible to these weak solutions. The nerve-trunks and larger branches are protected from the action of such injections by their connective-tissue sheaths. When practically bathed in an anesthetic solution by free injection into the surrounding tissues, these nerves remain unaffected. A very small quantity of the same solution injected within the spinal canal and so allowed to come in contact with the sheathless nerves, causes an almost immediate "nerve-block" and its resultant absolute indirect anesthesia of the tissues supplied by the nerves in such state of "physiologic section."

To overcome the protection which the connective-tissue perineurium affords to the larger nerve-trunk and branches, the practice of injecting anesthetic solutions directly into and through the sheaths into the nerve-bundles, that is, perineural and endoneural injections, was resorted to, and so obtaining the desired "nerve-block" and resultant indirect anesthesia. The method was, and is, very unsatisfactory, due to the difficulty and attendant pain in obtaining all of the nerves to a part for injection, the time involved in the preparation, and the final unsatisfactory partial anesthesia so frequently attained.

Bier conceived the idea that an anesthetic so-

*Read before the Hennepin County Medical Society, December 5, 1910.

lution injected into the exsanguinated circulatory system of a confined portion of an extremity, would, by this blood-route and osmosis, reach and so anesthetize all of the end-organs within the confined portion of the limb, so giving a direct anesthesia of all of the tissues, skin, fascia, muscles, periosteum, and bone. Not this alone, but that the interior of the large nerves and branches, that is, the nerve-fibre bundles would also be reached and anesthetized, the resulting "physiologic section," "nerve-block," giving an absolute indirect anesthesia of the complete extremity distal to the zone injected.

Preliminary to such a trial Bier took a limb which had been amputated through the thigh for progressive gangrene, placed a tight circular rubber-bandage constriction above and below the knee, dissected out the saphenous vein below the upper bandage, ligated centrally, introduced a cannula, injected fifty c.c. of a solution of indigocarmine, and ligated the vein distally. The specimen was placed in a solution of formalin for two days, when the dissection showed all of the tissues within the confined, injected portion—skin, fascia, muscles, periosteum, bone-marrow, and nerves—to be colored a delicate blue. The large veins contained a very small amount of the indigocarmine solution.

Instrumentarium.—1. A graduated 100 c.c. Janet syringe, which is a very strong, powerful ground-glass and metal instrument without washers. This is fitted with a strong rubber tube with a bayonet-lock attachment for connection with a cannula for introduction into the vein. The cannulae are 1.5, 1.75, and 2.0 mm. in diameter, and end in a circular dull edge backed by two pressed grooves for fixing the vein-securing ligature. They are fitted with a stop-cock to prevent the return of the injected anesthetic solution after the removal of the syringe. All of the connections must be perfect, as considerable force is sometimes exerted in the injection. 2. Two Esmarch rubber bandages of extra heavy weight, of $3\frac{1}{2}$ and $6\frac{1}{2}$ yards in length, for the upper and lower extremity, respectively. Two lighter weight rubber bandages $1\frac{1}{2}$ yards in length with tapes for tying, to be used for maintaining the exsanguination and confining the injected anesthetic solution.

Anesthetic.—A 0.5 per cent solution of novocain in normal salt solution at 98.6° F., body temperature.

Technic.—Elevate the limb for several minutes, and, by massage and stroking towards the

heart, aid gravity in freeing the extremity of some of its venous blood. Now apply an Esmarch bandage from the very distal end of the extremity to a site above the decided field of operation. Each turn of this ascending spiral expulsion-bandage is made with the rubber greatly on the stretch, and such that each turn overlaps the preceding one by a third or half. A very complete exsanguination is of the greatest importance, especially in the zone to be directly injected, which should be as nearly bloodless as obtainable. Place a rubber circular bandage of a number of stretched overlapping turns just above the end of the expulsion-bandage, which is now removed, leaving a bloodless limb, the exsanguination being maintained by the central bandage above. At a distance, never less than four nor greater than eight inches distal to the central bandage, place a second similar one. The zone between these two bandages is arranged so as to accommodate the desired field of operation, if direct anesthesia is to be employed, and is known as the area of direct anesthesia.

Expose under local anesthesia the largest superficial vein immediately distal to the central bandage, and dissect it free for a distance of one-half to one inch. Ligate centrally, and with a small pair of sharp-pointed scissors cut the wall of the vein sufficiently to accommodate the cannula, which is now introduced well into the vein. This insertion must be done carefully and without force, which might push the end of the cannula through the intima or through the outer coats of the vein. Place a distal ligature surrounding the vein and its contained cannula, and tie and fix the first double turn of a surgeon's knot, cinching it down on the included structures. The cannula is now carefully withdrawn until the ligature catches in the groove at its end, when the ligature is again tightened and the knot completed, so fastening the cannula securely into the vein. Connect the syringe containing the anesthetic solution to the cannula and inject slowly, but forcibly if necessary, the dose decided upon. Direct anesthesia or amputation may be immediately begun in the area between the two bandages. Indirect anesthesia follows in the complete extremity distal to the injected zone in a time depending upon the size and thickness of the limb, in the forearm nearly immediately to within three to six minutes. The indirect anesthesia of the deep tissues results earlier than the superficial, as shown by a painful wrist or finger-joint becoming painlessly movable while the skin

is still sensitive. About one minute after the sensory anesthesia is present, motor paralysis sets in, which is the symptom to be waited for before beginning the operation in the indirect-anesthesia area.

The distal bandage is now removed, so giving an entire free limb for operation under absolute local anesthesia, lasting just so long as the central bandage is permitted to remain. Upon the removal of the central bandage at the completion of the operation, motor function returns almost immediately—in less than one minute. Sensation follows in from two to seven minutes. A reactive hypermia also obtains, as following the removal of any constriction of the extremities.

Cases of infection and malignancy are always to be operated on under indirect anesthesia, due to the absolute contra-indication to the application of the Esmarch expulsion-bandage over such areas. In these cases the distal bandage is first applied above the pathologic area. The exsanguination is begun from the distal bandage to the site of the placing of the central bandage, which is now applied. The area of direct anesthesia between the two bandages is injected as described. The distal bandage in these cases is not removed until the completion of the operation unless necessary.

Bier does not hesitate to apply the expulsion-bandage over the old tuberculous joints and old fistulæ of necrosis.

The surgery of the hand and wrist and the foot and ankle may be performed under direct anesthesia with a single central bandage, the injection being made into the whole part distal to the central bandage, maintaining the exsanguination and confinement of the anesthetic solution.

The central bandage is at first uncomfortable until after the direct injection, upon the completion of which a partial anesthesia obtains under the bandage, due to a forcing of some of the anesthetic solution into the constricted tissues, after which it is usually no longer irksome. When greatly complained of in highly sensitive individuals, it may be replaced by a similar bandage applied about the completely anesthetized tissues, just distal to the original central bandage. Resort to this procedure is rarely necessary.

The vein to be injected.—Any superficial vein of a caliber such as to accommodate the cannula may be employed. In the selection of the vein, before exsanguination, compression centrally by the hand or circular rubber bandage, by causing

engorgement and so prominence of the vein, is of assistance in fat extremities. The vein decided upon may be marked with tincture of iodine or methylene-blue to aid in its locating when the limb is bloodless, or it may be immediately exposed and dissected before exsanguination, the resulting wound being protected from the Esmarch exsanguination by a light dressing. The veins usually used are the long saphenous for the entire lower extremity. The parva may be employed. For the upper extremity the cephalic, the basilic, and the median are mostly used, the cephalic being the vein of first choice.

The vein, if visible, is exposed by a short longitudinal incision; otherwise by a transverse incision over its anatomical location. This is done under ordinary local injection of the skin and subcutaneous tissues with 0.5 isotonic novocain and adrenalin. The subcutaneous infiltration is especially important in fat extremities when the veins lie deep. The dissection of the vein must be absolutely free from pain, especially with children; otherwise their confidence is lost and nervousness develops. With a correct technic the first needle-prick should be practically the only pain experienced in the whole procedure of venous anesthesia.

The exposure of the vein for injection should be made immediately distal to the central bandage, for, due to the central ligature of the vein, there is always a narrow, one-half inch, garter-like skin area immediately distal to the proximal bandage in which the anesthesia is only partial. The subcutaneous and deep anesthesia is absolute to the edge of and underneath the central bandage. If the injection into the vein be made farther distally this garter zone will be correspondingly broader. This precaution is especially important in knee resections under direct anesthesia.

The zone of direct anesthesia between the two circular bandages swells with the injection and becomes warm from the warm solution. The skin becomes even more pale, if the exsanguination has been complete; otherwise slightly blue in areas. The injection is usually easy, and is absolutely free from pain. If a vein-valve should happen to lie over the end of the cannula, great force may be required for the injection. Leakage of the solution through veins cut in the exposure of the main vein, may be prevented by hemostatic forceps and ligation.

Dosage.—Fifty to sixty c.c. for the upper extremity; eighty to one hundred c.c. for the lower extremity. Half of the above dose for children. One hundred c.c. is the maximum dose.

Indirect anesthesia is to be employed in all cases of infection and malignancy, which conditions contra-indicate the exsanguination of such areas and in surgery requiring the complete limb for operative field, as in sequestrotomies and tendon-transplantations. Large areas of scar-tissue within the operative field also call for indirect anesthesia, as scar-skin is very difficult to directly anesthetize. Indirect anesthesia is of course absolute under these conditions. All other cases may be operated on under direct or indirect anesthesia according to the will and choice of the surgeon, the direct form having the advantage of giving an immediate anesthesia.

Venous anesthesia may be employed for all of the surgery of the extremities in which an Es-march may be placed over a zone some four inches wide at or above the field of operation. It is not intended to replace general anesthesia for the surgery of these parts except when such general anesthesia is contra-indicated. General enfeeblement and the renal, cardiac, pulmonary, diabetic, blood, and shock contra-indications to general anesthesia are the indications for venous anesthesia.

Due to the "nerve-blocking", obtained by this method of anesthesia the shock attending the major surgery of the extremities, especially that following amputation, is mitigated. None of the nausea and emesis, sometimes so greatly dreaded, is experienced, and the patients may be immediately placed on a full diet, for which they are usually ready. A great many individuals are relieved when told and assured that their operation can, and will be, performed absolutely without pain, loss of consciousness, or the taking of a general anesthetic. Those who manifest nervousness before the operation quite soon gain their composure when they find that no pain is experienced. It is sometimes well to plug the ears of nervous patients with cotton.

This method has been employed at the Royal Surgical Hospital in Berlin in some 250 cases, including all of the major operations performed on the extremities. In Bier's first report of 134 cases,—10 amputations, 37 resections, 7 arthrodeses and arthrotomies, 29 sequestrotomies, 1 osteotomy, 12 sutures of bones, 10 tendon-trans-

plantations and sutures, 6 severe phlegmons, 7 extirpations of varicose veins, 2 Dupuytren's contractions, and 13 miscellaneous cases,—there was no single ill result following the venous anesthesia. One motor paralysis of the hand occurred, due to bandage-pressure, lasting one month and then rapidly clearing up. This might have happened as does sometimes obtain after bloodless operations of the extremities performed under general anesthesia. In two of the cases emesis followed the completion of the operation, which may have been toxic in character from the anesthetic.

REPORT OF THE WRITER'S CASES AT THE ROYAL SURGICAL HOSPITAL, BERLIN

1. Wiring of radius—"automobile Colles" fracture.
2. Acute suppurative tenosynovitis of palm and forearm.
3. Brisement forcé of the knee-joint.
4. Removal of a broken needle deep in the wrist.

5. Tendon-suture of extensors of the leg.

AT THE MINNESOTA UNIVERSITY HOSPITAL
On the Service of Dr. J. E. Moore, Surgeon in Chief of the Department of Surgery.

6. Ununited fracture of the ulna and radius, giving a flail-like forearm; both bones exposed; fractured ends trimmed square for apposition; two four-screwed Lane steel bone-plates screwed over the site of the fracture of the radius and ulna.

7. Amputation of the leg, at the junction of the upper and middle third of the tibia, for frozen foot.

8. Double amputation of legs at the junction of the upper and lower third of the tibia for severely burned feet.

In the last case 150 c.c. of a 0.5 per cent solution of novocain in normal saline was altogether injected for both legs. This was 50 c.c. more than the maximum dose of one hundred c.c. prescribed by Bier, and was necessary, due to the double amputation being done at one time. Its use was made possible by the following procedure: Immediately after the amputation, before the ligation of the blood-vessels, 100 c.c. of normal salt solution was injected through the cannula, which had been left remaining in the vein, so washing out all of the excess of the novocain solution, and lessening the amount of the anesthetic absorbed.

EPIDEMIC JAUNDICE*

BY ARTHUR N. COLLINS, A. B., M. D.

AUSTIN, MINNESOTA

It is the writer's desire at this time to thank his colleagues, Drs. Daigneau, Leck, Lewis, Peirson, and Worthing, individually and collectively, for their efforts in assisting in the work of obtaining the data concerning the cases for consideration in this report. Without their co-operation it would have been impossible to collect the material for clinical study in so short a time.

Toward the latter part of the fall just passed (1910) the writer's attention was called to several cases in children of what Holt and other writers describe as gastroduodenitis. These cases grew in number, and upon comparing notes with other physicians in this locality, it was found that our experiences with such cases tallied fairly well. Adult cases also soon began to develop with considerable rapidity, and an epidemic of this "yellow jaundice," as it was popularly called by the laity, seemed imminent. A few cases developed in September and the number increased rapidly during October and the early part of November; also a few cases continued to develop during the balance of November and December.

Whether the following facts have any bearing upon the etiology of this epidemic or not is a matter of conjecture. About August 1st the water in the mill-pond opposite the municipal pumping-station was lowered until considerable of the river bottom area was exposed to view. This continued for a week or two or until some construction work near the water's edge and above the dam was well under way. The dam was raised. On October 8th, during a fire in Austin, the river water was turned into the city water-mains to augment the supply for extinguishing the fire. The greater number of cases of jaundice seemed to spring up, one upon another, with rapidity following this date. This seemed significant in view of the fact that the infectious character of the disease was conspicuous. The river water was again turned into the mains on December 9, 1910, on account of fire. Cases continued to develop in December. The river water has not since been turned into the mains, to the writer's knowledge, and the epidemic is practically ended. The comparative dates of onset are—

September 6th and 20th.....	2 cases
October	20 cases
November	14 cases
December	7 cases
Date not given.....	5 cases
December, 1909.....	2 cases

The last two were sporadic cases occurring in a family of five or six children, and were under the writer's care in December, 1909. The hygienic conditions were poor, and these two little girls (age 7 and 10) were bed-fellows.

In view of the facts, and wishing to study the nature of the cases a little more in detail, it was decided to collect a group for the purpose of making a clinical analysis of them. The accompanying table is the result.

This group of 50 cases is but a meagre representation of the whole epidemic, and is probably about one-fourth of the number of cases occurring in Austin and immediate vicinity. Only those exhibiting jaundice have been selected to go into this report, though it is well to say in passing that there have been a number of cases of an abortive nature, seen early by a physician, exhibiting the characteristic chain of symptoms, but not showing jaundice.

The statement has been made by other writers on this subject that males are more often affected than females. This group does not seem to bear out that observation. Twenty-seven of these cases were females and 23 were males. Over two-thirds of the cases were of 20 years or younger. The oldest case in this series was in a patient of forty. Cases of seventy years and over are mentioned in reports of other epidemics of this nature. The youngest case in this series was ten months old, the next older being three years. Holt states he has seen no cases under two years of age. Most of the cases occurred in residents in this locality. Those given as "transients" were students who reside here during their school terms.

The onset is given in 66 per cent of the cases as insidious. In a large number of them the acute symptoms were manifest after a period of two or three days to a week of general ill-feeling.

An effort was made to ascertain whether there was a history of contact with other cases of the kind. In 18 the answer was returned "yes."

*read before the Mower County Medical Society at the January, 1911, meeting.

The appearance of the jaundice occurred in from twenty-four hours to seven days after the onset of acute symptoms. One case was reported as late as the tenth day. The degree of jaundice seemed to bear little relation to the severity of the attack. The last case on the chart was fairly ill for fourteen days, the jaundice appearing only in the whites of the eyes.

Abdominal tenderness was generally located where the pain was felt, i.e., in the epigastrium, mesogastrium, gall-bladder region, and occasionally at the umbilicus. In a few cases there was no complaint of tenderness, nor could this symptom be elicited on palpation by the examiner.

General lassitude was a fairly constant symptom. In some cases this was extreme. Heaviness in the limbs was also a prominent feature. A certain amount of mental depression was exhibited in 58 per cent.

Itching of the skin was present in 58 per cent, and a certain variable amount of desquamation is reported in 30 per cent of the cases. The latter figure probably does not cover the number of cases of desquamation, as this symptom appears late, usually some time after the patient has passed out of the physician's care.

Constipated clay-colored stools were the rule. In a few cases diarrhea was manifest. Here the question arises: If the bile were not obstructed would not diarrhea be a more frequent and prominent symptom in view of the acute gastrointestinal manifestations?

The urine showed bile in variable quantities; albumin and casts occasionally.

The total length of illness varied from five to twenty-eight days, an average of about ten days. The height of the temperature apparently bears no relation to the total length of illness. Three cases having temperatures of 102°, 103°, and 104° are reported as having a total length of illness of 5, 21, and 7 days, respectively.

Over one-half of these cases are reported as using the city water for drinking purposes. The rest are reported as using well or spring water. It is safe to say that a large number of these last mentioned drank city water when in the city from farms, or otherwise, during the fall months and when other water was not available.

Only four of these cases are reported as "bed-fellows" of another such patient. Mention is made of one case which was the only one in a

family of three children. There have been numerous instances, however, during this epidemic of three or four cases occurring in the same family.

Recurrence appeared in three cases. In one it appeared in two weeks (following an etherization for removal of the tonsils and adenoids), and in the other two recurrences developed four weeks after their initial attacks.

To sum up: This group of 50 cases is about one-quarter of the total number comprising this epidemic to date. Patients were about equally divided among males and females. The youngest was ten months. The onset was chiefly insidious, and close contact with other cases seemed not to be a prevailing factor. Where contact did exist, the time preceding the onset of the more acute symptoms in the exposed person varied from seven to fourteen days. In one the days were actually counted as sixteen after exposure (personal contact with a jaundiced case) to the time of onset of acute symptoms. Vomiting occurred in 74 per cent of the cases, and was very persistent in a few. Abdominal pain was chiefly epigastric tending toward the region of the bile-passages or toward the umbilicus. The appetite was almost invariably poor. About 20 per cent craved acids or sours. Headache was chiefly frontal. The temperature-curve was not characteristic. Slow pulse was not frequently observed. Jaundice appeared at the end of a period varying in length from twenty-four hours to seven days after the onset of acute symptoms. Objective tenderness followed the lines of subjective pain as a rule. General lassitude was a fairly constant and very notable symptom. Itching and desquamation were probably present in a larger number of cases than reported. The total length of illness averaged about ten days. The height of temperature bore no relation to the total lengths of illness. City water was consumed in probably a great many more of the cases than reported. There have been no deaths.

Two other local epidemics in this State have come to the writer's attention, one at Lake Wilson, Murray County, and the other at Cambridge.

Considering the literature on this subject: Notknagel quotes Henning as having collected upwards of 86 epidemics in the literature. Epidemics were described at the beginning of the eighteenth century. Only eight were extensive and those near the seashore. The majority were

circumscribed. In three epidemics the patients were chiefly children. The course of the disease is generally benign. Some epidemics, however, present more serious features. In seven of them the disease was severe enough to cause deaths.

The prognosis seems to be grave in pregnant women and those in the lying-in period. Mancini reported an epidemic including four parturients. Two of these were critically ill, but finally recovered; the other two died. The majority of the epidemics occurred during the fall and winter. Those in the spring months seemed to be the most dangerous. It is Nothnagel's opinion that these cases cannot always be said to have an infectious origin; that breathing of polluted air seems to be the main factor in causation in many cases; and therefore that the intoxication theory should receive consideration.

Boggs states the disease is most frequent in the second and third decades, and nearly 90 per cent of the cases reported are males. He states the incidence is greater in the spring and summer months and in wet seasons, and diarrhea is common. Contrary to this opinion our cases were chiefly in October and November. Our season was exceptionally dry, and constipation was the rule.

Rankin in describing an epidemic of twenty-three cases calls attention to the opinion of other writers that influenza is a causative factor in epidemic jaundice. He thinks, however, that influenza had nothing to do with causation in the epidemic he reports. These cases occurred in July and August, and there had been no influenza in the neighborhood. The disease seemed to run through families of children. In some cases there was diarrhea.

Dixon reports an epidemic in Talladega, Alabama, of 200 or more cases occurring during the summer and fall of 1907. There were 30 women and 145 men. Fifty were negroes. Twenty-five were children and eight were infants. The blood of the latter, he claims, contained plasmodium malariae. Almost all cases were well clothed, fed, and housed. The children were all boys except the baby cases. The men went to work in three or four days, as a rule. A few winter cases later were more severe and lasted longer. The water-supply was held in suspicion. Two cases terminated fatally; one a boy who contracted pneumonia, and the other a woman who contracted the "jaundice" just before childbirth. The child was still born, and the mother died in a few days.

Peck reports an epidemic in Derbyshire, England, of 69 cases; ages, three to sixty, the majority seventeen to twenty-five. Chilliness to a distinct rigor was present in all. Only a few showed rigor. Cramps in the calves of the legs occurred in many cases. Diarrhea was only occasionally present. One death occurred from acute yellow atrophy. He reports the autopsy in full.

Leslie reports an epidemic of 50 cases in and about Andover, Maine, and tabulates them. He thinks the whole epidemic can be traced to four logging-camps or perhaps one where the water-supply was a very low brook and the sanitary conditions bad. He is of the opinion that the disease is infectious, probably through the breath or through some of the excretions of the body. He saw one relapse. He found the disease most severe in old people and brunettes. A cold or acute illness predisposes, and it is noticeable that in each family-group one or two of the most rugged escape.

Barker and Staden report six cases out of seven hundred men in the Baltimore City jail. These occurred in November and December, 1908. The onset was sudden. There were chills and headaches in one-half the cases. Jaundice appeared in 6, 8, 7, 5, 8, and 2 days, respectively. The leucocytes were 5,200 to 23,200. The sickest man with the highest temperature had the highest white count. The low ones showed no acute symptoms at the time. Polymorphonuclears predominated. No parasites were found. Albumin was found in the urine of all six; also casts, epithelium, urates and triple phosphate crystals. Blood-cultures were negative. Positive agglutination reactions were obtained for bacillus paratyphosis (stain, "Cushing") with the serum of every case. A rabbit was given six cubic centimeters of defibrinated blood from one patient and died three days later. It was normal until the last twelve hours when it seemed intoxicated and stupid. The authors conclude that the infectious character is clear; that the negative blood-cultures point to a local infection rather than a bacteremia; that the gastro-intestinal symptoms make a diagnosis of gastro-enteritis necessary, their opinion being that food, probably meat, was the most likely source of the infectious agent; that the so-called Weil's disease is probably not a separate clinical entity; that either water or food must have been the source of infection. They advance the further etiological theory: (1) ingestion of

tainted meat containing living paratyphoid bacilli; (2) the development of gastro-enteritis due to this organism; (3) the appearance of catarrhal jaundice due to extension of gastro-enteritis to the biliary passages.

Robertson reports a small epidemic of six cases in Onancock, Va. All cases were children. Addison, in 1906, reported two sporadic cases occurring in St. George, Ontario.

Deaths have been few, and the pathological findings meagre. Thornburgh, in 1907, reported a case which he called Weil's disease. It was a severe case resulting in death. He reports the autopsy findings in full. He concludes in a severe case that treatment is of no avail. The case is rather doubtful of identity, but may have a place in this paper by reason of its similarity and for its pathological findings.

The writer regrets that no measures were taken at the active point of our epidemic with a view to throwing some light, if possible, on the specific etiology. Epidemiological counsel was

sought, but so late in the course of the epidemic that no appreciable amount of material could be collected for bacteriological or pathological study. At the present time there seem to be no cases to work on. The benign character of the disease is soon discovered by the laity, and a great many cases are not seen at all by a physician.

The question may well be asked, what influence, if any, has this infection upon the future of the bile-passages and gall-bladder of the individual?

REFERENCES

1. Nothagel: Encyclopedia, "Icterus Epidemicus."
2. Boggs: Osler's Modern Medicine, Vol. III, p. 528.
3. Mancini: Gazzetta degli Ospedali e delle Cliniche, Milan, June 2, XXXI, No. 1, pp. 1-16. Astr. Jour. A. M. A., Vol. LIV, p. 578.
4. Rankin: Brit. Medical Journal, 1904, Vol. I, p. 1122.
5. Dixon: Alabama Medical Journal, 1907-8, Vol. XX, pp. 320-324.
6. Peck: Brit. Medical Journal, 1901, p. 1659.
7. Leslie: Boston Medical & Surgical Journal, 1909, Vol. 161, p. 62.
8. Barker & Staden: Johns Hopkins Bulletin, Vol. XX, p. 310.
9. Robertson: Virginia Medical Semi-Monthly, Vol. II, No. 7, p. 159.
10. Addison: Canada Lancet, Vol. XXXIX, No. 8, April, 1906.
11. Thornburgh: Journal A. M. A., Vol. XLIX, p. 415.

IS THERE TRANSMISSION OF ACQUIRED CHARACTERISTICS?

By PROF. DR. ROBERT MEYER OF BERLIN

Translated from Deutsche Medizinische Wochenschrift, xxxvi, No. 23, 1906

By F. L. ADAIR, M. D.

MINNEAPOLIS

It may appear somewhat daring to open, in a short article, a question which has occupied scientific minds for generations; still I believe I may here maintain the possibility of transmission of acquired characteristics, which is now denied by the majority of writers, especially if I leave out of consideration, as much as possible, the special literature, which von Hansemann and others have critically considered in a commendable manner reaching a standpoint opposite to mine. I pretend nothing more than to point out a few ways in which the question could be definitely answered if some of my assertions are not taken as direct proof.

As is well known, Weismann disputed the inheritance of acquired characteristics because the sexual cells represent a cell class distinct from the somatic cells by which somatic changes could not be transmitted. Since then it has been much discussed. Among the recent authors believing in inheritance of acquired characteristics are Semon and Schultz, the latter of whom believes that "there is a process of involution be-

tween the end of the individual and its beginning, and that in this the secret of inheritance is hidden."

Accordingly Schultz is an adherent of the assumption that there are acquired characteristics. Godlewski seeks to refute him. Semon does not recognize the sharp separation between somatic and sexual cells. Kammerer is also to be mentioned among the believers in the inheritance of acquired characteristics; and in his writings one can find the literature reviewed.

Weisman, Roux, and Godlewski also admit, in accord with the experiments of E. Fischer, Standfuss, and others, the inheritance of acquired attributes, if influences operate upon the germ cell within the parental organism. If, however, only the somatic elements with the exclusion of the genital glands are influenced, the change thus arising will not be transmitted, at least every convincing argument for it is lacking, (Godlewski).

This limitation of "inherited characteristics" is of course intended to exclude those instances

of change from direct influence of the germ cells. Only the inheritance through indirect influence upon the germ cell in a correlative manner can be considered as an inheritance of acquired characteristics. The proof that the characteristic under consideration is acquired, must be brought forward for each individual case. It is of course very difficult to fulfill this requirement, but if the proof is only once brought forth, the principal opposition to the inheritance of acquired characteristics is overcome. The principal opponents proceed upon the assumption that one cannot imagine in what manner the soma changed by acquisition, could call out corresponding changes in the germ cell. From this negation arises the view that the inherited changes must originate from a spontaneous change in the germinal protoplasm. It is impossible to conceive of any development without variability of the germ plasma, but, indeed, it hardly needs to be emphasized that this does not exclude the inheritance of acquired characteristics.

The principal objection, that an adequate change in the germinal glands through acquired somatic alterations is not conceivable, is of course entirely without importance; at least the objection is subjective and of no more value than the view that the fitness of animate nature is so evident that it could not have reached the present condition of development without transmission of acquired characteristics. Thus one subjective idea, or rather the impossibility of definite conception, stands against another. One may, indeed, say that the idea of fitness is anthropocentric, but the limited power of conception is none the less so. The fitness of things (adaptation) is the result of selection, which through the accident of germinal variation eliminates the unsuitable acquired peculiarities and favors the suitable ones. The creative principle shows itself thus in appropriate accidental variations; the selection is the principle of enduring formations; therefore we see only the suitable ones.

Is that correct? Is it possible to explain this significant adaptation only by selection, the influence of which dare not be denied, or can the "suitability" be reached, not only through the power of the soma to adapt itself to external influences, which indeed no one denies as fundamental, but also through the capacity to transmit further these acquisitions through influence upon the germ plasma?

I shall try to "couch a spear" for this power

of the soma, by pointing out appearances (phenomena) which, in my opinion, throw in part the influence of the accident of variation and in part the possibility of the influences of selection in a very doubtful light. Next a few examples which show that individual characteristics which will be apparently acquired in later life as a result of function or through external stimulus, are indeed present in a similar manner during fetal life, although such stimulus is here lacking. As is well known, mucous membrane becomes covered with squamous epithelium under the drying influences of the atmosphere. In a similar manner other stimuli, mechanical and perhaps also chemical, affect the epithelium, so that cornification can also take place in the larynx, pharynx, etc. On the other hand moistening, especially with mucus, hinders, to a certain extent, this cornification. In fetal life the external stimuli which empirically lead to cornification, are lacking, and yet the cornification of the epithelium makes itself prematurely evident. From this it is easy, from the analogy with the pathologically acquired cornification, to decide in favor of the inheritance of acquired characteristics. A similar conclusion from analogy results from the observation of the development of hollow viscera. Here also we miss the influence of external stimuli, which we recognize in similar structure-formation in later life.

I have already in another place¹ designated the formation of certain organs as an example of transmission of acquired characteristics because I cannot satisfactorily explain the appropriate quantity and direction of the musculature in any other way. It is indeed striking how, both in amount and direction, they are adapted to the later function, even during the development, at a time when the stimulus of function is still lacking.

One can indeed truly say the organs could not functionate in the same manner if the accident of germ variation had formed them otherwise, but we know, nevertheless, that in later life the strength and direction of the musculature is determined by the normal and abnormal stimulus of function; it must indeed be a curious accident which properly replaces in the ontogenesis this stimulus of function. The amount of muscle corresponds to the strength of the stimulus; the structure (the direction of the fibers) follows the direction of the stimulus; perhaps the latter needs a short explanation. The content of the muscular organs works

through distension as a stimulus; the contraction is the response and produces (through excessive nutrition,—Roux) compensatory growth. The use or demand in a definite direction causes a hypertrophy of the fibers lying in that direction or of the fibers pressed into that direction, thus the direction of the stimulation determines the fiber direction. A demand working in several directions produces a compensatory growth in several directions; a cylindrical organ, for example the intestine, is stretched in horizontal and longitudinal directions by the increasing pressure of the content; the content becomes pushed aside by the compensatory hypertrophy of the musculature in a transverse and longitudinal direction; the circular musculature diminishes the stretched horizontal diameter, and the longitudinal musculature decreases the increased length. This example should show how one can imagine the origin of the amount and direction through demand. Is it not easy to assume that the strength and direction of the musculature, adapted even during the development to the later function, represents an acquired characteristic?

There are indeed in the development enough other appearances of adaptation to the later purposes, which one can consider only as a transmission of acquisitions.

One can scarcely ascribe the quantity and direction of the fibers in the musculature to the accident of germ-variations. The sphincters are not located accidentally at the end of the organ, and indeed especially so if this undergoes, in the course of the phylogenesis, a marked displacement. Thus no one without prejudice would throw the change of the quadruped into a biped upon numerous variations of the entire muscular and skeletal rudiments in the germinal egg, but would consider it as an acquired characteristic; and yet the whole musculature and skeletal structure of mankind is present in bipeds and bimana. The bladder musculature is already previously adapted to the quantity of urine, although the bladder arises independently of the kidney. The lumen and musculature of reservoirs of every kind are mechanically acquired properties; after extirpation of the gall-bladder indeed here and there a new reservoir is formed. Nevertheless the reservoir of the stomach, the gall-bladder, the bladder, seminal vesicles, etc., and their musculature, adapted in quantity and arrangement for demands made

upon them later, are indeed deposited in the germ.

In addition it is especially worthy of notice that the lumina of the hollow viscera, even before they have a content, are laid in folds, so that they—or, let us say confidently, in order that they—may be adapted from the beginning to the changing conditions of fulness in their later uses; and truly this formation of folds is quantitatively entirely proportional to the later demands, for example, of the bladder to the kidney excretion; a kind of "Kompositions-harmonie" (Driesch).

In numerous species the organs of copulation fit one another like a model and its mold. Is it indeed left to accident to adapt in embryonal life the vagina to its later use? Would the accident be so frequent? What accident could evolve the plan for an increasingly intimate connection of the embryo with the mother in the higher species of animals, and adapt at the same time to this alteration the entire muscular apparatus, the bony pelvis, and the metabolic processes of both individuals even in the germ?

It is surely possible to bring forward numerous similar examples. Let this suffice, however, to show that one cannot intrust such things to accident; at least the maintenance of living organisms is still such an apparent endeavor of nature, that she does not leave it exclusively to the kindness of accident.

Gegenbauer established, in the comparative anatomical description of the skeleton, that the changes begin in the fingers and toes, as the parts standing in the most direct relation to the external world. Thus characteristic changes arise also on the places where the skin of the extremities touches the ground; here the skin forms cushion-like prominences, balls, which even at birth are demonstrable in the parts, which will touch the ground; and one can designate these only as acquired peculiarities. It may be incidentally noted as striking that these places have no hair, nor even hair rudiments. That would surely be a curiosity as an accident. It appears to me especially interesting that in elephant's enormous connective-tissue deposits on the soles, acting exactly like buffers, make possible the light tread of the giants. From such "accidental" harmonizing formations which are adapted to the outer world, all mankind is made up. To prove this in detail, is most important for the entire question.

Moreover, as the origin so the disappearance;

in the alteration of the extremities gradually disappearing toes leave behind, as rudimentary, parts of the toes (pads, nails), and thus again the parts which still stand in relation to the external world. We shall return again to the value of the accident hypothesis, but as one observes in its "Kompositionsharmonie" the still quite-insufficiently known animal organism, this much can be said: The belief in the accident in this organization can remove great obstacles.

I believe I dare assert that comparative anatomy should be consulted in the first place, if one wishes to study the question of inheritance, and that happens of late to a lesser extent. Naturally, it is possible to bring forward many more examples, but to all the rooted opponent of inheritance of acquired characteristics will answer, accident of germ-variation.

And now to the "fitness." I do not perceive, incidentally remarked, why that word should be objected to, if one will be honest about it. Thus "fitness" is the result of selection says the opponent. If an animal swallows only hard solid grain, for which its digestion is not arranged, it goes to destruction; an animal whose stomach is fitted for it, can eat grain. Why is the stomach of certain animals (birds) and also their taste adapted to grain? Is that an accident or "Kompositionsharmonie"? To all the myriad questions which can be brought forward the answer would read: "In the beginning was the accident; the selection retains the suitable and excludes the unfit things." As true as the first part of the sentence is, so is the second part fundamentally false, if one does not admit immediately that acquired characteristics are inherited. If the opponent says the selection excludes the injurious, so it is absolutely correct, but not all purposelessness or unfitness is injurious; the useless things of the accidental germ-variation need not be a hindrance to the preservation of the species, there could, among the million or billion accidents of the germ-variation, which, according to the law of probability, were necessary for the formation of a single animal species, arise structures equally of no importance for use or injury. I shall present only a few examples by way of illustration. One may truly believe that the fitness of organs has value for survival so that an animal species acquires an advantage from having the eyes externally, the teeth and the tongue at the beginning of the digestive tract, and for comfortable use all four extremities on the ventral side, (how strikingly

indeed is the endeavor of nature devoted to one side of the body—the ventral side!). I understand very well that species that do not have such organs or have them in a wrong place, are put in an unfavorable position in the struggle for existence and can perish. I do not understand, however, why not a single one of all the accidents of organ-formation resulting from germ-variation could occur in places where it serves no purpose and could not remain intact in positions where it does no harm. What interest, what accident, causes the germ to provide claws calculated only for the tip of the extremities and not in other places? When we see organs which were once useful, but from transformation of the organ have not been used for thousands of years and have become incapable of use, as the superfluous nail of the dog or the chestnut of the horse, "rest" of a toe always transmitted from generation to generation as a useless disfigurement, the question still intrudes itself, Why of all the numerous accidents of variation from which a single selection results, are not at least a few purposeless, though harmless, formations, left behind as hereditary; again using our examples, such as eyes in the stomach, or teeth and tongue in the anus, or claws upon the skin of the back? From such superfluous and useless, perhaps uncomfortable but nevertheless harmless, organs it would be difficult for the species to perish. And if the harmless disfigurements are not removed through selection, what causes them to disappear while the superfluous toe or the chestnut remain, or become reduced and disappear only very slowly through the atrophy of disuse, the result of hereditarily acquired waste?

Why does the germ-variation thus provide such highly complicated organs only on definite, exposed, and suitable places? How should one interpret that? Or, in order to satisfy the most exacting demands, in face of the fact that organs from the primitive house-rat, as gill-clefts or primordial kidney, can reveal in the ontogenesis the palingenesis and persist abnormally, one should at least expect that in the ontogenesis some of the purposeless, unsuitable, and inappropriately located though harmless organs, which the accidents of germ-variation have created, should come into evidence; for if they also atrophy from disuse, the germinal rudiments should not be affected thereby, as the opponents of "Erwerbsvererbung" think. Whoever will observe this argument in its entire scope, let him

imagine what an enormous number of formations there must be which come out singly from the accident of germ-variation, until an organism of purposeful things adapted to one another, arises. And from this legion of purposeless formations should nothing remain? Not once in the ontogenesis? Let one imagine what a number of experiments nature must have undertaken, in order to hit upon the mechanism of movements of the eye or those of the hand; and how crude is even this mechanism in comparison with the powers of co-ordination and correlation in the complete organism! And where are the relics which never fulfilled a purpose?

Perhaps one may find pleasure in trying to form a conception of it by imagining the probable number of purposeless or unsuitably located organs that must proceed from accidental germ-variation before one purposeful organ results and thus estimating in what an infinite number of years an organism developed with so numerous organs working in proper places harmoniously with one another. The possibility of the accident of germ-variation is present. The question is, which is the more wonderful, the influence of the germ plasma in a, to us, unknown correlative manner through purposeful acquired variations, or the accidental variations of the germ, which transmits out of the endless fullness of accidental products only the suitable, but not the purposeless, even though they be harmless? Which is then more wonderful, which more unexplainable?

Only the external conditions are accidental: the capacity of the organized substance to arrange itself in a limited degree according to the principles of the division of labor, of the least exertion, and other principles of making the most complete use of external conditions, is not accidental.

The variability of the germ cells is present, the selection of the variations is decisive, but it is also self-evident that those species best maintain their existence whose soma cells react locally with purpose to continuous external demands and whose germ cells can experience a responsive change in corresponding parts. It is not incomprehensible that correlation between soma and germ cells should be present, but only not understood, as many other things.

The theory of selection suffers no loss from this; the limited capacity of the soma for purposeful reactions does not exclude the origin and preservation of purposeless formations. If they become atrophic through disuse, this also

reacts on the germ rudiments, so that this constantly becomes more rudimentary and at last disappears, apparently sooner than the organs which were during the palingenesis in use for a considerable time (for example, the eyes of subterranean living animals, etc.).

Also in pathology one should expect relics of useless formations. Nothing is simpler than the thought that the exceptionally transmitted relics of useless and unsuitable formations in the atavic (palingenetic) development should occur in the form of embryonal heterotopias and of tumors; and nothing is more difficult than to bring forward clearly defined examples of it, so that I can therefore desist from a detailed pursuit of the thought. That such relics are as infrequently demonstrable in the pathology as in the ontogeny, while relics of reconstruction still play a rôle not to be underestimated, points to the conclusion that, not the inherent inclination toward accidental variation, but the purposeful reactions and their transmission govern and fashion directly in the phylogeny.

Whoever shrinks from the recognition of the purposefulness out of anxiety for the "Vitalismus," or of one of the related anthropocentric ways of thinking regarding natural events, may comfort himself that one does not need to restrict the "Vitalismus" to organic nature, and that "Vitalismus" is just as fruitless a catchword as "Materialismus," both are anthropocentric ideas and equally useless; to reach the last argument, ideas which though truly harmless are still purposeless, and, it is to be hoped, may soon be excluded through selection.

CONCLUSION

The "accident of germ-variation," taken by the opponents of the inheritance of acquired characteristics, as a creative principle, does not explain, according to their view, many attributes arising independently of one another which appear through "Kompositionsharmonie" as numerous purposeful things in the organisms. On the other hand, it does not explain why the still more numerous unsuitable things, which in all probability originated through accidental variation, leave behind no traces in the ontogenesis or in the pathology. Since only the injurious things become excluded through selection, the elimination of the harmless, inappropriate things would be comprehensible only through inheritance of acquired characteristics. As I have tried to show by isolated examples in the ontogenesis and phylogensis, the organism not only reacts to the external world purposefully, but it also transmits the acquired characteristics.

ABSENCE OF APPENDIX AND GALL-BLADDER*

BY ARTHUR A. LAW, M. D.

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MINNEAPOLIS

The following case occurred in my service at the University Hospital:

B. P., male, aged 35, married, Norwegian, referred from Fridley, Minn., brought to the hospital in police-ambulance, admitted 9 A. M., May 27, 1911.

History: Ten years ago he had a severe attack of appendicitis and peritonitis, and another severe attack six years ago. He was laid up six weeks with this last attack. Since this attack he has had repeated acute attacks, with tenderness and pain referred to McBurney's point; has been tender nearly all the time.

Present history: The present attack com-

menced twenty-four hours ago. The patient was alarming, so that an immediate operation was done under ether anesthesia. A McBurney's grid-iron incision was made. Bloody fluid was found free in the peritoneal cavity. The cecum was congested, but not distended. There were old adhesions about the cecum, which was closely bound down. No appendix being found it was concluded that this organ was retroperitoneal, so the outer leaf of

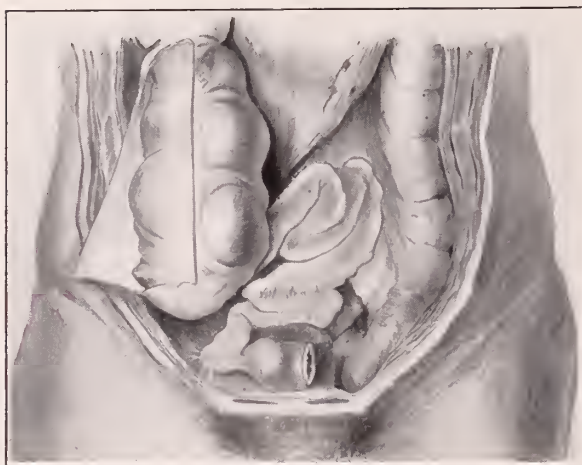


Fig. 1.

menced twenty-four hours ago. The patient was seized with colicky pain in the right lower abdomen, and was forced to stop work. He began to vomit, and continued throughout the night, and was very sick, being extremely tender over the appendix.

Physical findings: Man, well nourished and muscled; abdominal muscles on right side rigid, and exquisitely tender at McBurney's point; abdomen, tympanitic; pulse, 108; temperature, normal; urinary findings, normal; two enemas returned clear.

Diagnosis: A tentative diagnosis of appendicitis, with probable perforation of the appendix and probable obstruction of bowels was made.

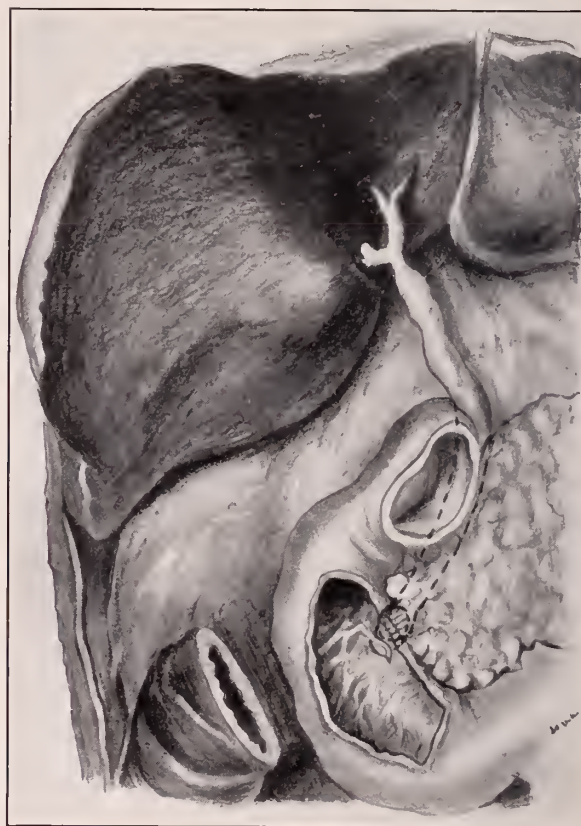


Fig. 2.

the peritoneal covering of the cecum was split, and this organ lifted and turned toward the median line. To our surprise there was no appendix, with no evidence of one, save a small area of scar-tissue about one inch in diameter with very slight pouting of the cecal wall at the site of the appendix. The ileum next the cecum was collapsed, and in tracing it down the gut was sharply flexed upon itself twelve inches from the large bowel. Four inches further, it was

*Report of two cases presented before the Minnesota Academy of Medicine, June, 1911.

flexed in return, each knuckle being formed by adhesions, and the bowel being so sharply flexed as to form a complete obstruction. Eight inches further, another sharp flexure occurred, knuckling the bowel again. This was bound down to the parietal wall at the brim of the pelvis just below the cecum. These adhesions were removed, and the bowel straightened. All other visceral organs were normal. The man has made an uninterrupted recovery. (See Fig. 1.)

The dogmatic assertion is frequently made that when an appendix sloughs it is absorbed. All of us are familiar with the frequency with which we have to re-operate after draining appendicular abscesses when the appendix has not been removed *per primum*. The persistence of a sinus, pain, and tenderness necessitates removal of the appendix or a portion of the same.

Morison, after a study of these cases, asserts that in 90 per cent of instances, the appendix is not absorbed. In all probability this man originally had an appendicular abscess. The appendix sloughed, and, being retroperitoneal, the abscess and its contained appendix, ruptured and discharged into the large bowel, which after-

wards closed, leaving little evidence of the primary peritonitis.

While possibly not so rare as the above case, I am constrained to report briefly a companion case which occurred in the same service two weeks previously.

While operating on A. B., a male, aged 41, farmer, from Frost, Minn., for the classical symptoms of gall-stones, I was astonished to find complete absence of the gall-bladder. The common and hepatic ducts were much distended, due to a large non-fascetted gall-stone impacted in the ampulla. I was able to crowd this stone back into the common duct, and to remove it without invading the duodenum. He had a chronic pancreatitis, probably due to lack of mucus in his bile.

This man gave a history of severe gall-stone colic fifteen years ago, with repeated attacks and jaundice since. Unquestionably, his gall-bladder was the seat of an obliterative inflammation, which ultimately resulted in its complete destruction.

After a stormy convalescence he made a complete recovery. (See Fig. 2.)

BOOK NOTICES

PROGRESSIVE MEDICINE. A quarterly digest of advances, improvements and discoveries in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D. Lea & Fébiger, Philadelphia.

This excellent quarterly, covering the latest literature on the subjects mentioned in this volume, is brought up to date in a most complete and yet concise manner.

The first 109 pages of the issue of March 1st, are devoted to the surgery of the head, neck and thorax. Of especial interest is the article devoted to brain surgery, particularly that referring to brain tumors and the interesting statistics on operative and non-operative procedures in fractures of the skull.

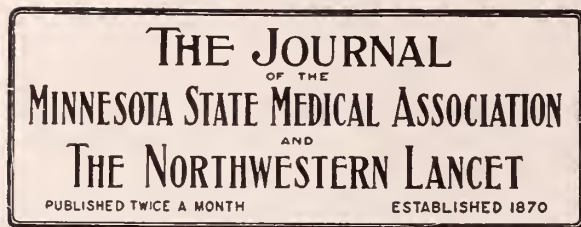
The section devoted to the infectious diseases insists on the advisability of isolating these, with

the hope that, at some future date, they may be eradicated.

Following this is an article devoted to pediatrics. The pages devoted to infant-feeding are especially worthy of mention, as this important branch of pediatrics is so often neglected. The author brings forth the advisability of determining the caloric value of food for the infant in order thereby to overcome the dangers of over-feeding.

The closing pages devoted to rhinology, laryngology, and otology enforce the necessity of making accurate diagnoses of diseased conditions involving these parts. In the portion devoted to diseases of the tonsils, it is of interest to note the various systemic disturbances which may follow this commonly belittled affection.

The book as a whole is varied in its treatment of subjects, and literature on each is brought before the general practitioner as well as the specialist, which otherwise would necessitate a large amount of time to obtain.



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Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

July 1, 1911

PAIN IN THE BACK

Dr. J. L. Rothrock, of St. Paul, read a very instructive paper upon the above subject before the Minnesota Academy of Medicine at its session of June 7th. He went over the various causes which produce pain in the back, and enumerated everything almost that could be classified as a legitimate cause. He referred particularly to the pelvic organs and the comparative infrequency with which diseases within the pelvis make pain in the back. He admitted very generously that in many of the so-called gynecologic cases the central nervous system is the sole cause of back pain, and he cited a number of instances to show that pelvic surgery is very much exaggerated as a causative factor.

It is exceedingly gratifying to hear a surgeon of Dr. Rothrock's standing take such a broad and liberal view of a very ordinary and troublesome complaint. In looking over the histories and in calling to my memory the people who complain of pain, and then recording the number of operations that are done for the relief of pain in the back, it is very conclusive that too much operating is done for this commonplace symptom.

If more attention were paid to the nervous life of the individual and more careful investigation were made into the history of previous disorders, the surgeon or gynecologist would hesitate be-

fore operating. Undoubtedly a good many pains in the back are due to pelvic discomfort, and undoubtedly many sincere surgeons and physicians treat the pelvic organs with the idea in mind that it is a form of suggestion. The treatments are harmless and unless over-done probably relieve many pains and aches that women are heir to.

If gynecological treatment could be carried out with this broad principle in mind, there would be less tinkering and less chronic invalidism following pelvic surgery. It is well recognized that, in the majority of women, the more the attention is fixed upon the pelvic organs the more likelihood there is for suggestion and for the disease to continue. As a matter of fact, many of these people are relieved from their suffering by simple methods, wholesome advice, general hygienic improvement, and a distraction of their attention from a supposed cause of pain.

JUST PRIDE

There is a pride that goeth before a fall, and there is also a pride that exalteth a man or a nation; and such is pride in the successful achievement of real service, and it becometh a man and a nation alike.

The medical profession of the Northwest has much reason for rejoicing in work done, and at some future time we shall review this work; but today we want to speak—and we speak with great pride—of a unique and a big service rendered humanity by the State of Minnesota, and rendered through the medical profession. With the semi-centennial of her admission as a State into the Union just passed, Minnesota yet has the distinction of being the first State to make provision for the most needy and dependent class that sends its appeal for succor to the hearts of our people. The indigent crippled and deformed child that passes the period of possible help or cure, is evidence of a degree of thoughtlessness on the part of a State and its citizens that seems incompatible with civilization; and yet up to 1897 not one of our States had made any provision whatever for this class, which is very large and its appeal is seemingly the most urgent and the most impelling of all the appeals of suffering and distress made to the public.

On October 27, 1897, the Minnesota State Hospital for Indigent Crippled and Deformed Children was opened in St. Paul. It was made possible only by the generosity and hospitality of the City and County Hospital of St. Paul.

which gave it a home, and by the personal devotion of Dr. Arthur J. Gillette, who conceived it and who has given it, unstintedly, of his time and his invaluable services as orthopedic surgeon. Drs. Dennis, Ramsey, Heath, McDavitt, Riggs, Dunning, Armstrong, Gilfillan, and other specialists of St. Paul, have likewise contributed generously of their services.

The institution now has a home of its own at Phalen Park, near St. Paul. The building was designed by a first-class architect, and is modern in every particular. The Home has twenty-five acres of ground, and in another year will have an industrial school in which each child will be taught such occupation as he or she can follow in life. The Minnesota legislature has been quite generous in support of the institution, and this is probably due to the strong appeal made by these living examples of helplessness; but the appeal was effective only after the children were gotten together by the founder of the home and hospital, which conveys a suggestion to others who would follow the example of Dr. Gillette.

The annual report for the year 1910 has not been printed, and even may not be, and so we want to lay before our readers some interesting statistics gleaned from it, but taken in no particular order:

The present capacity of the institution is 100 beds, and there were present at the end of the year 65 children.

Somewhat over 600 children have been treated since the Hospital was opened, and of these 88 died, but all died of acute diseases.

Over 50 per cent of all cases treated have suffered from some form of tuberculosis of the joints.

The total number discharged as cured is 284, and the number improved is 172. A case is pronounced *improved* when only slight defects remain, or, in cases of paralysis, when the patients are able to get about. The number discharged unimproved is 18, but in this number several were taken away before the Hospital would have discharged them, including four not treated at all.

No patient is taken except upon the certificate of the family physician.

The last appropriation for the Hospital made by the legislature was \$60,000, to cover the cost of maintenance for two years.

The good done by this institution and the men back of it, is not confined to the 600 patients

treated in it, although that is sufficient to justify all outlay of money and personal effort: the example set by the State has been of incalculable value. The State of New York copied our law and followed our example. Nebraska, Massachusetts, and Illinois have fallen into line with like institutions, although that of Illinois is not yet in operation, but money has been appropriated for it.

To Dr. Arthur J. Gillette, the inspiration, the founder, and the surgeon of the institution; to the St. Paul physicians whose gratuitous services have made possible the wide scope of the work; and to many generous St. Paul benefactors, all credit is due for this noble beneficence and for the honor the Hospital has brought the State of Minnesota.

We trust our sister Northwestern States will soon enroll themselves in the yet small list of States that care for their most care-worthy class of dependents.

THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION MEETING

The annual meeting of the South Dakota Association was held at Pierre on June 14th, 15th, and 16th, with a really good attendance considering the difficulty of reaching that city from many points in the State. All of our associations have this difficulty to contend with, and it is one not easily solved.

The meeting was, in our opinion, an excellent one. It was characterized throughout by an earnest professional spirit. The Councilors and House of Delegates took hold of some difficult problems before them with a determination to bring about a solution of such problems that would be creditable to the profession and helpful to the public.

The President's address was such a document as one would expect from a man who is both a successful practitioner and a successful business man. His recommendations showed the acumen of the former and the sanity of the latter. And the Association showed great wisdom in electing as successor to President Finnerud Dr. W. G. Smith, also a successful business man, who stands so high in public estimation that he has been elected three times to the railroad commission of the State. He will be exceedingly helpful to the Association in its dealing with legislative problems, and even more helpful to the public in this work.

The program covered the live problems fac-

ing the general practitioner; and the three outside men who presented papers brought to the Association the problems of the specialist which equally interest the general practitioner.

The social side of the meeting was excellent in character and commendable for the fact that it was not allowed to encroach upon the essential work of the Association.

The Ladies' Auxiliary, composed of the wives of the members, and meeting annually at the same place and time as the Association, and exclusively for social purposes, is an institution whose value cannot be easily estimated. While the society is new, we believe every state association would be helped by the organization of such a society.

The editor of THE JOURNAL-LANCET greatly regretted his inability to attend the meeting, but he wishes to express his appreciation of the courteous reception given the journal's representative, and also of the unanimous adoption of the paper as the official journal of the Association. We shall speak, at full length in our next issue, of this action and of similar action taken by the North Dakota Association.

MISCELLANY

MINNESOTA A "BACKWARD STATE"

In the anticipation of the certain passage by the Wisconsin legislature of the Youngman bill allowing counties to erect tuberculosis hospitals and giving \$3.00 a week per patient of state aid, Fond du Lac and Douglas counties have already made appropriations of \$10,000 each for this purpose. The Wisconsin State Tuberculosis Association affirms that six other counties undoubtedly will take similar action this year.

In Minnesota we have had permissive legislation for counties for some time, but the failure of the late legislature to enact Senator Hanson's state aid amendment will probably result in no action being taken under the county tuberculosis hospital act for two years.

The legislature in its wisdom (?) thought that the counties didn't need any aid for tuberculosis hospitals, or perhaps it considered the whole antituberculosis movement as a fad. In any case, as a result Minnesota will be in the list of "backward states" in the matter of the prevention of tuberculosis for another two years.

REPORTS OF SOCIETIES

MINNESOTA ACADEMY OF MEDICINE

At the June meeting of the Academy Dr. F. R. Wright reported a case of second infection with syphilis. A medical man had contracted this disease when twenty years old and was treated for three years. Recently, he had again become infected, gave a typical picture, and the Wassermann reaction had been positive.

Dr. A. A. Law reported a case in which three attacks of appendicitis had occurred, and yet upon operation no appendix was found. His interpretation was that it was a retroperitoneal appendix and that it had sloughed off. In another case he had found complete absence of the gall-bladder. There was a history of many attacks of gall-stone colic, and upon operation a chronic pancreatitis was found. The gall-bladder had evidently been the seat of an obliterative inflammation. (The report of these cases appears on page 313 of this issue.)

Dr. H. B. Sweetser exhibited a tubercular kidney which he had removed from a woman, aged 43. She was of a family of twelve children, four boys and eight girls. The girls were all tubercular except one, while the boys were all sound, and free from the disease. The patient had been sick for fourteen years, the chief symptoms being frequent urination and pain. Cystoscopic examination revealed an ulcer about the mouth of the ureter on the right side with pus, and the ureter on that side was palpable through the vagina. Operation revealed the right kidney tubercular, and the ureter very friable. The woman gave no evidence of tubercular disease elsewhere.

Dr. Hunter raised the question as to whether Dr. Law's case was really retroperitoneal. Dr. Law replied that he realized that the question is not settled positively as to whether these cases are real or apparent, but that good authorities quote 4 per cent of appendix cases as retroperitoneal.

Dr. Stewart called attention to a case seen by him in which the appendix was located five inches up behind the liver and was positively retroperitoneal. He also exhibited a specimen of fungous sarcoma upon which he had used formaline. He had applied it freely, protecting

the border by using peroxide, thus causing a shrinking and dropping off of the growth.

Dr. J. M. Armstrong reported that, in a case of chancre upon the inferior turbinated bone, he had taken smears and gotten a positive Wassermann reaction.

Dr. A. E. Wilcox reported a case of appendicitis in which a peculiar gelatinous fluid was found in the cecum. In this were found calcareous deposits. The lumen of the cecum had been cut off by the disease.

Dr. Gustav Schwyzer reported an unusual case of confinement as follows:

A woman, aged 30, had a pendulous submucous myoma uteri, of the size of two large fists, which sloughed following a normal confinement.

"The confinement took place May 25th. It was absolutely of normal character. A healthy boy was born. No instruments were used, but the afterbirth had to be expressed.

"On the third day after the confinement the temperature went up to 101°, and the pulse increased accordingly. The patient was not complaining of anything. The lochial secretion was normal. On the fifth day after confinement the patient complained of neuralgic pains in her right leg, located in the region of the sciatic nerve. Pressure on the peroneal nerve below the capitulum fibulae was very painful. The temperature went up to 103.5° and the pulse to 120.

"We did not find any thrombosis in the leg; the lungs were normal. The patient said she felt well except for that neuralgic pain. No odor to the secretion. On the seventh day the condition was about the same. Within four or five hours the temperature jumped from normal to 105°. A renewed careful examination from head to foot was done. Vaginally, we found by entering the cervix and forcing the finger into the uterine cavity directly above the inner ring a globular tumor of which we were not able to determine the size, reaching far behind our finger. Believing that the tumor might interfere with the normal flow of the lochia we made an intra-uterine washing. At one time we saw some cloudy, pussy fluid coming back with the solution, but it cleared away. Next evening she felt somewhat better. The condition remained the same for two or three days; that is, the fever was not so high, though the pulse remained in height between 110 and 120. We tried to wait as long as we could in order to gain time which would make surgical interference safer.

But, on the eleventh day after the confinement, we found the patient in a drowsy condition, undoubtedly poisoned. Renewed vaginal examination revealed that the tumor had passed the cervical canal and lay in the vagina, filling this canal as much as an ordinary-sized placenta, of which it had the consistency, but, of course, not the form. It impressed the examining hand as if there was a placenta.

"An operation became imperative, and we proceeded under anesthesia a very short time after. In spite of the long specula, we were not able to see the cervix, but we felt it in most of its anterior and lateral circumference. Pulling on the tumor with both hands would not draw down the uterus at all. We removed the tumor—a sloughed, gangrenous, odoriferous mass—by morcellement, and so gained inspection of the cervical ring. The posterior lip of the cervix was torn vertically, and its edges looked grayish. The broad attachment of the tumor on the posterior wall of the uterus did not appear demarcated, and went gradually into the wall of the uterus, which appears thickened as far as we could reach. We used hot-iron cautery to stop the bleeding points. There was a good deal of bleeding from the torn cervical canal. Suturing with continuous catgut and gauze tampon in the uterine cavity to avoid further bleeding were done.

"Though the operation was not of long duration and the anesthesia very superficial, the patient's pulse went up to 160. We gave her hypodermoclysis, ergot and strychnine. In the afternoon of that same day her poisoned condition was extreme. The temperature went above 104°, pulse over 170, and we did not have very much hope for the woman. Continuous saline was given until liquids were taken by the mouth. By the following morning the improvement was very marked: the temperature was below 100° and the pulse 120. The patient has improved ever since."

Dr. Rothrock read a paper entitled "The Clinical Significance of Pain in the Back." The subject was discussed by Dr. W. A. Jones and Dr. J. C. Litzenberg. [Reference is made to his paper in our Editorial Columns.]

Dr. F. C. Todd read a paper entitled "Ethmoiditis, a Common Disease, Giving Rise to Neuralgia and Other Symptoms, Only Relieved by Exenteration of the Ethmoid Cells."

ARTHUR W. DUNNING, M. D., Secretary.

HENNEPIN COUNTY SOCIETY

The Society held its regular monthly meeting on June 5th, with forty-three members present.

The Daily News asked the Society for an expression of opinion in the matter of public drinking-cups, and, upon motion by Dr. Bell, the Society expressed its hearty approval of the movement to abolish such cups. It was shown that cups used in the public schools are loaded with germs.

Dr. G. D. Head presented two medical cases, and Dr. A. W. Abbott read a paper on "Neuralgias of the Lumbar Nerves in Relation to Abdominal Diseases."

Dr. F. R. Wright reported a case of gall-stones.

Dr. R. E. Farr presented a case of colic followed by an operation for supposed appendicitis.

Dr. F. S. Bissell reported a case of sciatica caused by appendicitis.

Dr. M. Scham was elected a member of the Society.

C. H. BRADLEY, M. D., Secretary.

NEWS ITEMS

Dr. J. T. Holcomb has moved from Chisago City to Lindstrom.

Dr. J. A. Butz, of Monterey, is absent, doing special work in surgery.

Dr. E. R. Kramer has moved from Scotland, S. D., to Mitchell, S. D.

The physicians of Watertown, S. D., have formed a protective society.

Dr. R. H. Kinney has moved from Lake Benton, Minn., to Lancaster, Wis.

The North Dakota Homeopathic Association met at Fargo, N. D., last month.

Dr. D. O. Smith has moved from Bismarck, N. D., to Mountain Lake, Maryland.

Dr. Nels O. Sandben, of Park River, N. D., was married on June 1st to Miss Millie A. Amber.

Dr. Owen McKeon, of St. Paul, has gone to Vienna to do special work in surgery and pathology.

Dr. Finn Koren, of Appleton, has moved to Madison and entered the firm of Drs. Giere & Johnson.

Dr. James Murphy, of Ft. Benton, Montana, was married last month to Miss Marie Viedt, of Anoka, Minn.

Dr. Geo. H. Stidworthy, of Viborg, S. D., was married on May 31st to Miss Millie Hansen, of the same place.

Dr. Edward O. Holm, of Bozeman, Mont., was married last month to Miss Birdie A. Garlock, of Wells, Minn.

Drs. Lewis and Collins, of Austin, have dissolved partnership, Dr. Lewis succeeding to the business of the firm.

Dr. Clyde Barney, a recent graduate of Syracuse, has taken the position of assistant to Dr. Granger at Rochester.

Dr. C. E. Willcutt, of Schaller, Iowa, has moved to Minneapolis, and has offices at 4602 Lake Harriet Boulevard.

Dr. E. H. Lehman, who formerly practiced in Northeast Minneapolis, has returned to the city and located at 1914 Central Ave.

Dr. T. D. Smith, who has been an assistant of Dr. C. T. Granger, of Rochester, for the past two years, has decided to settle in Oregon.

Dr. C. C. Blakely, of St. Paul, a State University graduate, has received an appointment on the staff of the St. Peter State hospital.

Dr. O. H. Wolner has resigned his position as physician of the State Reformatory, at St. Cloud, and will move to Louviers, Colo.

Dr. John S. Laughead, of Letcher, S. D., lost his life last month by his automobile going over the bank into the James river near Letcher.

Dr. Paul Wagner, of Minneapolis, a recent graduate of Northwestern, has accepted a position in the Budd Hospital, of Two Harbors.

Dr. and Mrs. E. Jay Clemons, of Aberdeen, S. D., attended the A. M. A. meeting at Los Angeles, and the doctor may be away all summer.

Dr. Henry E. Latz, who practiced in Minneapolis for thirty years, and was the proprietor of a drug-store in South Minneapolis, died last month.

Dr. J. M. Fox, of Osseo, has gone to New York for post-graduate work. Upon his return he will locate in Minneapolis, with offices at 1940 Hennepin Ave.

Miss Mary Anderson, the very efficient visiting nurse of the Duluth Associated Charities, has resigned to accept a position in St. Mary's Hospital, Rochester.

Dr. Thomas W. Collinson, of Culbertson, Montana, was married last month to Miss Lily Dale, of the same place. Dr. Collinson formerly practiced at Maxbass, N. D.

Dr. W.P. Lee, who has been located at Fairfax for seventeen years, has sold his residence, office, and practice to his partner, Dr. George H. Walker, and has located at Northfield.

The physicians of Grand Forks, N. D., last month gave Dr. A. L. McDonald a farewell reception upon the eve of his departure for Duluth, Minn., where he goes to continue practice.

Dr. D. E. Rogers, of Portland, N. D., has gone to Harvard to do post-graduate work during the summer. Dr. Rogers is the efficient secretary of the Trail-Steele County Medical Society.

Dr. A. N. Currie, of North Yakima, Wash., has moved to Williston, N. D. He formerly practiced at Hatton, N. D. Dr. Currie has been doing post-graduate work at Rush for several months.

The Devils Lake District Society of North Dakota met at Devils Lake, N. D., last month. Papers were read by Drs. Jones and Cuthbert, and Dr. Dahl spoke on the work of the State Association.

Dr. E. A. Myerding, physician of the St. Paul schools, who has been doing the most efficient work in his medical inspection work, is taking a post-graduate course in eye and ear work in the Harvard summer school.

Dr. J. C. Duckworth, who represented the United Doctors at Duluth and whose license to practice was to be revoked by the State Board of Medical Examiners, dropped his case against the Board and agreed to leave the state.

A portrait of the late Dr. Henry L. Hutchinson, of St. Paul, has been hung in the rooms of the State Board of Health. Dr. Hutchinson was a member of the Board fifteen years. The portrait was presented by Mrs. Hutchinson.

The Sixth District Medical Society of North Dakota, met at Mandan, N. D., last month with an attendance of sixteen. Papers were read by Dr. M. W. Roan, of Bismarck; Dr. Rice, of Fort Rice; and Dr. A. W. Ide, of Brainerd, Minn.

Reports reaching this office as the paper goes to press show that a large number of Northwestern physicians went to the meeting of the A. M. A. at Los Angeles. We hope to be able to give a complete list of the same in our next issue.

The Trail-Steele (N. D.) County Society met at Hope, N. D., last month. Dr. L. R. Critchfield, of Galesburg, N. D., read a paper on "Cerebral Hemorrhage in a Man of 22 Years," and Dr. Wm. Scanlan, of Page, N. D., read one on "Convulsions."

The late Dr. Edwin Phillips, of Minneapolis, made a generous provision in his will for the education of poor girls in attendance at Minnesota normal schools, and a small amount is to be given annually to an industrial home at Boaz, Alabama.

Dr. F. A. Brugman, who has been practicing at Minot, N. D., for the past two years, has moved to Chicago to accept a position in the Illinois Charitable Eye and Ear Infirmary, a State institution. He will return to Minot after a year's work in the infirmary.

The Madison County Medical Society of Montana met at Butte, Mont., last month and elected the following officers for the current year: President, Dr. H. F. Smith, Pony; vice-president, Dr. A. Jordan, Twin Bridges; secretary-treasurer, Dr. G. F. Tidyman, Jeffers.

Governor Burke, of North Dakota, has appointed the following doctors on the board of trustees of the N. D. State Tuberculosis Sanitarium at Dunseith: Dr. James P. Widmeyer, of Rolla, and Dr. D. Lemieux, of Dunseith. A suitable building for the work will be erected at once.

Mr. Schaefer, of Noyes Bros. & Cutler, St. Paul; Mr. Nelson, of the Physicians' and Surgeons' Supply Co., of Minneapolis; and a representative of Sharp & Smith, Chicago, had charge of exhibits of the South Dakota State Medical Association last month. They all spoke of the considerate treatment received from the Association, and of the good orders from the members.

The South Dakota State Medical Association met at Pierre, S. D., last month. The transactions of the meeting will be published in full in our next issue. The following were elected officers for the current year: President, Dr. W. G. Smith, Sidney; first vice-president, Dr. C. E. McCauley, Aberdeen; second vice-president, Dr. F. A. Spafford, Flandreau; secretary-treasurer, Dr. R. D. Alway, Aberdeen; counselors—second district, Dr. J. B. Vaughn, Castlewood; eighth district, Dr. James Roan, Yankton.

Dr. Annie B. Hainer, a prominent practitioner of Sioux Falls, S. D., died at her home on

June 23, from pneumonia. Dr. Hainer was born at North Sydney, Cape Breton Island, N. S., in 1870, and graduated at the Women's Medical College of Philadelphia in 1903. Immediately after graduating she located in Lead, S. D., where she was in practice until 1909, when she removed to Sioux Falls. Dr. Hainer was an active member of the local medical societies and of the A. M. A., being State Secretary of the Committee on Public Health Education.

The Homeopaths and Eclectics, of South Dakota, held a joint annual meeting on June 22d at Sioux Falls, S. D. They endorsed the plan of compelling applicants for marriage certificates to pass a medical examination. The Eclectics elected the following officers: President, Dr. W. E. Daniels, Madison; vice-president, Dr. E. W. Goldman, Madison; secretary-treasurer, Dr. J. C. Greenfield, Avon. The Homeopaths elected the following: President, Dr. O. N. Hoyt, Pierre; vice-president, Dr. D. F. Sullivan, Frankfort; secretary treasurer, Dr. G. H. Fulford, Sioux Falls. Both bodies will meet next year at Madison.

Dr. Hibbert Winslow Hill, director of the division of epidemiology of the Minnesota State Board of Health, received, by examination, the diploma of Public Health from the University of Toronto at the recent Commencement, June 9, 1911. Dr. Hill graduated from Toronto in '93, with honors and a post-graduate scholarship, receiving the degree of M. B., which is the only degree in medicine granted by the University on graduation. In 1899 he received the M. D. degree, together with the Starr gold medal, the latter being awarded for his doctor's thesis on "The Relationship of Bacteriology to Public Health." The diploma of Public Health just granted to Dr. Hill is the only degree of the kind given by the University, although it has been open and the degree available for several years.

WIVES OF DOCTORS FORM AN AUXILIARY.

The Ladies' Auxiliary of the South Dakota State Medical Association was organized at Hot Springs last year and perfected at Pierre last month during the meeting of the State Association.

The object of the Auxiliary at the present time is purely social, in order that the wives of the doctors may become better acquainted. The attendance and interest this year showed that already the Auxiliary is a success.

The ladies were entertained royally by the

wives of the doctors of Pierre, and nothing was left undone to make the meeting a perfect success.

A reception was given to the ladies on Thursday afternoon at the parlors of the St. Charles Hotel, and in the evening there was a banquet at the Locke Hotel for the doctors and their wives, which was a most elegant affair. An auto ride and visits to the new state capitol, Indian school, and buffalo pasture, were other features of the entertainment.

The next meeting will be held at Mitchell. The following officers were elected for the coming year: President, Mrs. H. M. Finnerud, Watertown; first vice-president, Mrs. E. F. Reamer, Mitchell; second vice-president, Mrs. H. J. G. Koobs, Scotland; third vice-president, Mrs. C. A. McCauley, Aberdeen; secretary-treasurer, Mrs. B. A. Bobb, Mitchell.

FOR SALE—COPIES OF PROF. KNOPF'S PRIZE ESSAY ON TUBERCULOSIS

Authorized Norwegian-Danish translation, with an introduction by Prof. Saugman of Denmark; 96 pages; illustrated. Price, 1 copy by mail, 12 cents; 12 copies, freight or express, \$1.

Address the translator, Dr. A. C. Amundson, Cambridge, Wis.

BOOKS AND INSTRUMENTS FOR SALE

Books (Homeopathic), instruments, operating-table, nine pairs of tooth forceps, red cross dry-cell battery, etc., of the late Dr. C. L. Gates, are for sale. Address Mrs. Hattie E. Gates, Hancock, Stearns Co., Minn.

HOSPITAL FOR SALE

The Dr. Ray Humiston Hospital, at Worthington, Minn., is offered for sale on account of Dr. Humiston's death. Hospital is modern and fully equipped. For particular, address Mrs. Ray Humiston, Worthington, Minn.

PHYSICIAN WANTED

A competent physician is wanted to locate at Gaylord, Minn. For full particulars inquire of or write Dr. D. N. Jones, Gaylord, Minn.

PRACTICE FOR SALE

Having decided to move to Minneapolis, I offer for sale my practice of \$3,000 to \$4,000 per year in Red Wing, which is the best of the smaller cities of Minnesota, in the banner county of the state; an excellent class of people; fine schools, colleges, and churches, and good hospital advantages. Will sell part of fine office equipment at less than its value to a good man whom I can recommend and introduce, and who will buy my residence at a fair valuation. A little money will handle it all, time being given on balance. Might sell without residence if desired. This will bear investigation. If interested, give prompt attention. F. W. Dimmitt, M. D., Red Wing, Minn.

REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Diarrhical Dis- eases of Children	Cancer	Puerperal Septicemia
Ada	1,253	1,432	5													
Albert Lea	4,500	6,192	1													
Alexandria	2,681	3,001	1													
Anoka	3,769	3,972	5													
Austin	5,474	6,960	10	1		1	1		1						2	
Barnesville	1,326	1,353	0													
Bemidji	2,183	5,099	5		1	1										
Benson	1,525	1,677	1													
Blue Earth	2,900	2,319	5	1	1										1	
Brainerd	7,524	8,526	11	2	1										1	
Breckenridge	1,282	1,840	4				1									
Canby	1,100	1,528	0													
Cannon Falls	1,239	1,385	1			1										
Chaska	2,165	2,050	1													
Chatfield	1,426	1,226	3						1							
Cloquet	3,074	7,031	7			1	1									1
Crookston	5,359	7,559	2	1												
Detroit	2,060	2,807	0													
Duluth	52,968	78,466	112	16	4	10		1					2	7	5	3
East Grand Forks	2,077	2,533	7	2		1								1		
Ely	3,572	3,572	9	1	1	1								1		
Eveleth	2,752	7,036	8	3		1								1		
Faribault	7,868	9,001	0												1	
Fairmont	3,440	2,958	6			2										
Fergus Falls	6,072	6,887	3												2	
Glencoe	1,788	1,788	1													
Granite Falls	1,454	1,454	4													
Hastings	3,811	3,983	1													
Hutchinson	2,495	2,368	3													
Jordan	1,270	1,151	3													
Lake City	3,142	3,142	7			1									1	
Litchfield	2,280	2,333	2													
Little Falls	5,774	6,078	8	1		2							1			
Luverne	2,223	2,540	2	1					1							
Le Sueur	1,937	1,755	0													
Madison	1,336	1,811	4													
Mankato	10,559	10,365	14	1		1							1	1	1	
Marshall	2,088	2,152	6			1										
Marshall	2,591	2,591	2													
Melrose	202,718	301,408	34	34	4	50	13		1		13	2	2	8	17	4
Minneapolis	979	1,267	0													
Montgomery	2,146	3,056	3			1										
Montevideo	3,730	4,840	1		1										1	
Moorhead	1,934	1,685	1										1			
Morris	1,228	1,554	1													
New Prague	5,403	5,648	12			3										
New Ulm	3,210	3,215	4	1												
Northfield	1,247	1,774	0													
Ortonville	5,561	5,658	5		1				2						1	
Owatonna	2,536	2,475	1													
Pipestone	1,666	1,666	13	1		1							2			
Red Lake Falls	7,525	9,048	0													
Red Wing	1,661	1,666	*													
Redwood Falls	1,075	1,182	31	2	1	4									6	
Renville	6,843	7,844	0													
Rochester	1,100	1,011	2						1							
Rushford	1,304	1,159	10													
St. Charles	8,663	10,600	2													
St. Cloud	2,102	2,102	178	19	5	25	3	1			1	2	1	5	12	2
St. James	163,632	214,744	3													
St. Paul	4,302	4,176	2	1		1										
St. Peter	2,154	2,154	4	1		1										
Sauk Centre	2,046	2,302	3		1											
Shakopee	2,046	2,247	1													
Sleepy Eye	2,322	4,510	2													
South St. Paul	1,504	2,558	1	1												
Staples	12,318	10,198	11	1		2										
Stillwater	1,819	3,174	4													
Thief River Falls	1,111	1,111	0													
Tower	1,911	1,826	2			1										
Tracy	3,278	4,990	7	1		1										
Two Harbors	2,962	10,473	6	2		2										
Virginia	2,622	2,622	*													
Wabasha	1,276	1,613	2										1			
Warren	3,103	3,054	2													
Waseca	1,260	1,273	1											1		
Waterville	1,830	2,660	2													
West St. Paul	3,409	4,135	4												1	
Willmar	1,944	1,749	4			1									1	1
Windom	19,714	18,583	20	2				1			1				5	
Winona	813	1,043	3											1		
Winthrop	2,386	2,385	1													
Worthington																

REPORTED FROM 55 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

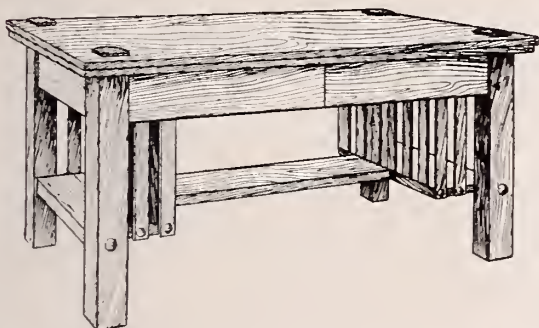
VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyneuritis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	4						2							
Aitkin	1,719	1,638	2													1
Akeley			0													
Appleton	1,184	1,221	1													
Belle Plaine	1,121	1,204	1					1								
Biwabik			1													
Bovey		1,377	0													
Browns Valley	721	1,053	0													
Buffalo	1,040	1,227	1	1												
Caledonia	1,175	1,372	0													
Cass Lake	546	2,011	0													
Chisholm		7,684	13			6								1		
Coleraine		1,613	2	1												
Dawson	962	1,318	1													
Delano	967	1,031	1			1										
Farmington	733	1,024	1													
Fosston	864	1,055	1													
Frazee	1,000	1,645	2													
Glenwood	1,116	2,161	1												1	
Grand Rapids	1,428	2,239	9			3										1
Hibbing	2,481	8,832	10		2									2		
International Falls		1,487	*													
Jackson	1,756	1,907	1													
Janesville	1,254	1,173	1												1	
Kenyon	1,202	1,237	3	1												
Lake Crystal	1,215	1,038	1													
Long Prairie	1,385	1,250	1													
Madelia	1,272	1,273	2													
Milaca	1,204	1,102	2											1		
Mountain Lake	959	1,081	6	1		3								1		
Nashwauk		2,080	2													
North Mankato	939	1,279	1													
North St. Paul	1,110	1,404	1				1									
Osakis	917	1,013	1													
Park Rapids	1,313	1,850	5												1	
Pelican Rapids	1,033	1,019	3		1											
Perham	1,182	1,376	*													
Pine City	993	1,258	2													
Plainview	1,038	1,175	1	1												
Preston	1,278	1,193	2													
Princeton	1,319	1,555	*													
St. Louis Park	1,325	1,743	1													
Sandstone	1,189	1,818	5	1	1	1										
Sauk Rapids	1,391	1,745	0													
South Stillwater	1,422	1,343	3			1										
Springfield	1,511	1,492	0													
Spring Valley	1,770	1,817	0													
Wadena	1,520	1,820	1													
Wells	2,017	1,755	*													
West Minneapolis	2,250	3,022	*													
Whalan	134	1,121	0													
Wheaton	1,132	1,300	1													
White Bear Lake	1,288	1,505	1													
Winnebago City	1,816	2,555	*													
Zumbrota	1,119	1,138	2			1										
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			15	3		3										
Rochester, Hospital for Insane			5	2												
St. Peter, Hospital for Insane			12												1	
Anoka, Asylum			6	1												
Hastings, Asylum			3	3												
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			7	3		2										
Owatonna, School for Dependents																
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			4			1										
OTHER PARTS OF STATE			786	64	17	103	17	10	12	....	2	....	9	35	47	9
Total for state			1894	178	44	247	37	15	21	....	17	4	22	68	113	22

*No report received. Registrar not doing his duty.

168 stillbirths and premature births not included in above totals.

Your Credit Is Good at The New England!

Forty-Ninth Semi-Annual Half Price Sale Manufacturers' Fine Furniture Samples.



A GAIN has the standing of Minneapolis as one of the great retail centers of the country been evidenced, and the value of a big outlet and resultant purchasing power of an individual concern been emphasized by the response to the announcement of our Forty-Ninth Semi-Annual Half Price Sale Manufacturers' Fine Furniture Samples.

DURING the next few weeks, cars aggregating an entire trainload, and a generous one, too, will have arrived from Grand Rapids, Chicago, Kenosha, Wis., Indianapolis, Holland, Mich., Charlotte, Mich., Detroit, Grand Ledge, Mich., and other large furniture manufacturing centers, to say nothing of the Samples procured from our local furniture manufacturers.

EACH and every piece therein picked merchandise, for "The New England" has the call, and not a single piece of furniture is purchased which is not altogether desirable. Other concerns in other cities are glad enough to get what we discard. "The New England" was the pioneer in the inauguration of these semi-annual events.

IT'S a good thing all around. The manufacturer gets rid of his last season's samples; he moreover gets his cash instant; "The New England" gets good advertising out of the arrangement, and its Customers the direct benefit.

OUR premises are large, but not large enough to begin to take care of the goods which have already arrived, to say nothing of those on the way and to follow. We shall do our very best to display these Samples for convenient selection.

IT is hardly practical to attempt a schedule, as the goods change from hour to hour. As fast as a piece is sold, another takes its place. All we can say is "Come and See."

EACH piece bears a tag on which is marked in plain figures its ordinary price and true selling value, which price you are privileged to Cut Squarely in Half!

WE can accept no approval or contingent sales of any character, but are pleased to place at the disposal of those whom it will convenience, Our Equitable Partial Payment Plan, with a very small down payment and the balance in monthly or weekly payments to suit.

WE would not hurry you one particle. The sale will continue for some weeks; just how long we cannot state. We would be glad to have you come in today, tomorrow, or any day and become as enthusiastic as we ourselves are over the merits of This Remarkable Sale.

New England Furniture & Carpet Co.

*Complete Furnishers of Homes, Offices,
Hotels, Clubs, Churches, Theatres
and Public Institutions*

5th St., 6th St. & 1st Ave. So., MINNEAPOLIS

PUBLISHER'S DEPARTMENT

SUMMER CASES

Conditions peculiar to the season now with us will present themselves for your consideration and a reference to the fact that Antiphlogistine has proven of particular service in sunburn, bee stings, insect bites, sprains, bruises, etc., will offer you a ready and satisfactory dressing and is procurable in all drug stores.

In those severe cases of dermatitis following undue exposure to the sun's rays, Antiphlogistine will quickly reduce the inflammation and the accompanying swelling and pain.

In all cases it should be applied thick and hot and well protected by ample covering.

INTESTINAL ANTISEPSIS

The problem of intestinal antiseptics again besets you more acutely than at other season of the year. You are often sorely puzzled in deciding upon what remedy you should actually prescribe for the many and varied conditions which call for such medication. Most of the intestinal antiseptics are irritating, objectionable in taste, and toxic. To be of any value they have to be exhibited in large doses, and then they generally become gastro-intestinal irritants, and the pathological condition is rendered even worse by a further complication.

In such conditions as infantile gastro-enteritis and chronic, catarrhal, and tubercular enteritis; in typhoid fever, chronic and subacute diarrhea; in fermentative dyspepsia, summer cholera, colitis, etc., a reliable, non-irritating, and non-toxic antiseptic is obviously needed.

A remedy which can safely be recommended for this purpose is Thiocol Roche, for, unlike many other intestinal antiseptics, it does not irritate the most delicate stomach, and being freely soluble in water, its effectiveness is certain. Unlike all other intestinal antiseptics it can safely be pushed to the point of saturating the system with guaiacol. Its exhibition is followed by increased appetite and weight. It is not habit-forming, is non-toxic and palatable.

Thiocol may be safely administered to children, as it is never followed by any untoward results.

Drop a line to The Hoffman-La Roche Chemical Works, 65 Fulton St., New York, asking them for the literature.

RELIABLE SECURITIES

When one seeks to invest money at a rate of interest above that paid by high-grade city and other bonds, i. e., above four or five per cent, he needs the advice of experts who are also reliable, whether he himself chooses the form of investment or leaves the choice to the experts. An attractive form of investment in the Northwest is country bank stocks, which pay larger dividends and are just as safe as a real estate mortgage, for the reason that the security back of them is practically all in mortgages selected by experts on the ground. The old-

time risks of defalcation, robbery, etc., have been entirely eliminated by insurance which is even safer than insurance against fire.

The Corporation Securities Company, of Minneapolis, deals in such stocks, and it is considered one of our most reliable monetary institutions. Any inquiry from physicians will receive courteous attention from them.

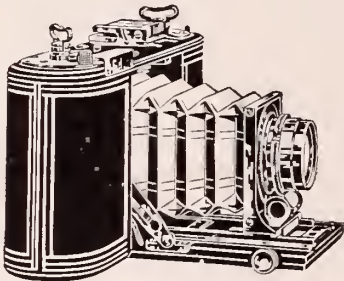
LIMOUSINES AND COUPES

The attention of our readers in need of limousines or coupes built for their automobiles, is called to the advertising card of the Wallis Coach & Carriage Works, of Minneapolis. The firm is doing a very large amount of work, and everything turned out by them is of the highest grade, and their dealings with customers are always perfectly satisfactory to the latter. They are a high-grade firm doing high-grade work.

NOYES BROS. & CUTLER

From time to time we call the attention of our readers to the fact that Noyes Bros. & Cutler carry everything needed by a physician or surgeon in his work, and yet this fact is not always remembered by men who deal with the firm simply as druggists. The physicians' and surgeons' supply department is unexcelled in America, and whether a complete outfit for a 500-bed hospital or a simple surgical needle of special shape, is wanted, this house can meet the need in the shortest possible time, and both the goods and the prices will be absolutely satisfactory, as will also the time of delivery.

It is always a pleasure to be able to assure our readers that an advertiser in our columns will serve them in such a manner that there will never be cause for complaint when a deal with such firm is closed, and this we can say, with positive assurance, is true when said of Noyes Bros. & Cutler, of St. Paul.



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Printing,
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Drink Pure Hawaiian Pineapple Juice

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Trade supplied through regular channels

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HAWAIIAN PINEAPPLE PRODUCTS CO., Ltd
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CARABANA

AUTO - INTOXICATION

Clinical experience has shown conclusively that CARABANA Water is the most agreeable and effective means of overcoming and preventing intestinal toxemia. No other water contains an equal amount of sodium sulphate in natural solution. Easily taken, even small doses of CARABANA will accomplish elimination and establish intestinal antiseptics when other measures fail completely.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, JULY 15, 1911

No. 14

TRANSACTIONS OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

THIRTIETH ANNUAL MEETING

1911

OFFICERS AND COMMITTEES

PRESIDENT

WILLIAM G. SMITH, M. D.....Sidney

FIRST VICE-PRESIDENT

CHARLES E. McCAULEY, M. D.....Aberdeen

SECOND VICE-PRESIDENT

FREDERICK A. SPAFFORD, M. D.....Flandreau

SECRETARY-TREASURER

ROBERT D. ALWAY, M. D.....Aberdeen

COUNCILOR—FIRST DISTRICT AND CHAIRMAN OF
THE COUNCIL

WILLIAM EDWARDS, M. D.....Bowdle

COUNCILOR—SECOND DISTRICT AND SECRETARY
OF THE COUNCIL

JAMES B. VAUGHN, M. D.....Castlewood

COUNCILOR—THIRD DISTRICT

DANIEL L. SCANLAN, M. D.....Volga

COUNCILOR—FOURTH DISTRICT

NAPOLEON B. GEARHART, M. D.....Pierre

COUNCILOR—SIXTH DISTRICT

FREDERICK TREON, M. D.....Chamberlain

COUNCILOR—SEVENTH DISTRICT

FREDERICK A. SPAFFORD, M. D.....Flandreau

COUNCILOR—EIGHTH DISTRICT

JAMES ROANE, M. D.....Yankton

COUNCILOR—NINTH DISTRICT

FRANK S. HOWE, M. D.....Deadwood

COMMITTEE ON SCIENTIFIC WORK

ROBERT D. ALWAY, M. D.....Aberdeen

JAMES ROANE, M. D.....Yankton

WILLIAM R. BALL, M. D.....Mitchell

JOSEPH G. PARSONS, M. D.....Sioux Falls

JAMES B. VAUGHN, M. D.....Castlewood

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

JOHN W. FREEMAN, M. D.....Lead

HANS M. FINNERUD, M. D.....Watertown

SILAS M. HOHF, M. D.....Yankton

COMMITTEE ON PUBLICATION

ROBERT D. ALWAY, M. D.....Aberdeen

CHARLES E. McCAULEY, M. D.....Aberdeen

E. JAY CLEMONS, M. D.....Aberdeen

MEMBER OF THE HOUSE OF DELEGATES OF THE
AMERICAN MEDICAL ASSOCIATION

THOMAS B. SMILEY, M. D.....Mt. Vernon

PROCEEDINGS OF THE HOUSE OF DELEGATES

The first session of the House of Delegates was called to order by the president, Dr. H. M. Finnerud, at 8 o'clock on the evening of June 14, 1911, in Room 300 of the Locke Hotel, Pierre.

The roll was called by the Secretary and a

quorum announced as being present, the following responding to the roll-call:

First District—Dr. Wm. Edwards, Bowdle; Dr. C. E. McCauley, Aberdeen; Dr. C. O. Olson, Groton.

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. H. T. Kenney and Dr. N. B. Gearhart, Pierre.

Seventh District—Dr. T. J. Billion, Sioux Falls; Dr. F. A. Spafford, Flandreau.

Eighth District—Dr. S. M. Hohf, Yankton.

Ninth District—Dr. J. W. Freeman, Lead.

The Secretary and the President.

Dr. R. D. Alway, Secretary-Treasurer, submitted the following report:

REPORT OF THE SECRETARY-TREASURER

To the President and House of Delegates:

The paid membership of the Association is as follows:

Aberdeen District.....	68
Watertown District.....	30
Brookings District.....	4
Pierre District.....	14
Mitchell District.....	31
Sioux Falls District.....	46
Yankton District.....	44
Black Hills District.....	34

270

Madison has again failed to report and Brookings reported only 4, making 270 the total membership.

All the societies are in a prosperous condition, with the exception of Brookings and Madison. The latter has not made a report in two years, and the former has made no official report this year. They have always been "weak sisters." I would recommend that the Council earnestly consider the condition of these two societies and at this meeting adopt some plan for their organization.

At our last annual meeting application was made by a number of physicians residing in the Hot Springs territory for a charter. On the recommendation of the Councilor of the district a charter was granted and a district created, to be known as the "Hot Springs District Medical Society, No. 10." At a special meeting of the House of Delegates and Board of Councilors in February, at Pierre, this charter was revoked, for reasons which are stated in the minutes of that meeting.

The terms of office of Councilors in Districts Nos. 2, 5 and 8, and of the Secretary-Treasurer, terminate at this meeting, and it will be necessary to elect their successors.

Respectfully submitted,

R. D. Alway,
Secretary-Treasurer.

On motion of Dr. Spafford the report of the Secretary-Treasurer was unanimously adopted.

To complete the Secretary's report the minutes of the special meeting of the House of Delegates and Council held at Pierre were read by the Secretary, as follows:

SPECIAL MEETING OF THE HOUSE OF DELEGATES

The meeting of the House of Delegates was called to order at 10 o'clock, A. M., February 21, 1911, in Room 145, St. Charles Hotel, Pierre, by First Vice-President, Dr. W. G. Smith, who presided in the absence of President H. M. Finnerud.

The following members were present: Dr. W. G. Smith, Sturgis; Dr. R. D. Alway, Aberdeen; Dr. Wm. Edwards, Bowdle; Dr. J. B. Vaughn, Castlewood; Dr. B. T. Green, Brookings; Dr. H. T. Kenney, Pierre; Dr. N. B. Gearhart, Pierre; Dr. E. F. Reamer, Mitchell; Dr. J. W. Freeman, Lead; and Dr. F. S. Howe, Deadwood.

Dr. Smith announced that the purpose of the meeting was to investigate the condition of the Hot Springs District Medical Society, No. 10.

The Secretary read the following complaint:

"To the President and officers of the South Dakota State Medical Association:

"Whereas, it appears that a charter was granted to the Hot Springs District Society at the annual meeting of the State Association held at Hot Springs September 27, 28, and 29, 1910; and

"Whereas, certain physicians whose names appeared as petitioners for such charter deny any knowledge of the petition at the time it was presented; and

"Whereas, we believe it can be shown that the chief object of the petition was the personal aggrandizement of certain of the petitioners;

"We therefore petition your honorable body to revoke the charter of said Hot Springs District Medical Society.

"October 15, 1910.

"WM. EDWARDS.

"R. D. ALWAY."

On motion of Dr. Freeman, seconded by Dr. Kenney, the complaint was referred to the Board of Councilors.

Dr. Smith brought to the attention of the House the fact that certain army surgeons at Ft. Meade were engaged in private practice without a license.

It was moved by Dr. McCauley, seconded by Dr. Reamer, that owing to the proposed changes in Health Bill Senate File No. 156, it is the sense of this body that the matter be indefinitely postponed.

On motion of Dr. McCauley, seconded by Dr. Freeman, the House adjourned to meet at the call of the President.

SPECIAL MEETING OF THE BOARD OF COUNCILORS

A meeting of the Board of Councilors was called to order at 11 A. M., February 21, 1911, in Room 145, St. Charles Hotel, Pierre, by the First Vice-President, Dr. W. G. Smith.

The following members were present: Dr. R. D. Alway, Aberdeen; Dr. Wm. Edwards, Bowdle; Dr. J. B. Vaughn, Castlewood; Dr. N. B. Gearhart, Pierre; Dr. F. S. Howe, Deadwood.

The Secretary read the following communication from the House of Delegates:

"To the President and Members of the Board of Councilors:

"The following complaint against the Hot Springs District Society has been received by this body, and we respectfully refer the same to you for investigation:

"Whereas, it appears that a charter was granted to the Hot Springs District Society at the annual meeting of the State Association held at Hot Springs, September 27, 28 and 29 1910; and

"Whereas, certain physicians whose names appeared as petitioners for such charter deny any knowledge of the petition at the time it was presented; and

"Whereas, we believe it can be shown that the chief object of the petition was the personal aggrandizement of certain of the petitioners:

"We therefore petition your honorable body to revoke the charter of said Hot Springs Medical Society."

"October 15, 1910.

"W. M. EDWARDS.

"R. D. ALWAY."

Dr. Edwards and Dr. Alway introduced a large amount of evidence in the form of communications and newspaper write-ups which had been received by them. After a lengthy discussion by the members present, Dr. Vaughn offered the following motion:

That the Board of Councilors recommend to the House of Delegates that the charter of the Hot Springs Medical Society be revoked on the evidence submitted, and that the territory be restored to the Black Hills Ninth District Society.

The motion was seconded by Dr. Howe and, being put to a vote, prevailed.

On motion of Dr. Vaughn the Council adjourned *sine die*.

SECOND SPECIAL MEETING OF THE HOUSE OF DELEGATES

The second session of the House of Delegates was called to order by First Vice-President Dr. Smith, at 1:00 o'clock, on the same date and at the same place as the first session.

The following members were present: Dr. W. G. Smith, Sturgis; Dr. R. D. Alway, Aberdeen; Dr. C. E. McCauley, Aberdeen; Dr. Wm. Edwards, Bowdle; Dr. J. B. Vaughn, Castlewood; Dr. B. T. Green, Brookings; Dr. H. T. Kenney and Dr. N. B. Gearhart, Pierre; Dr. E. F. Reamer, Mitchell; Dr. J. W. Freeman, Lead; and Dr. F. S. Howe, Deadwood.

The following communication was read by the Secretary:

"To the President and Members of the House of Delegates:

"The Board of Councilors have investigated the complaint against the Hot Springs District Medical Society, referred to it by your honorable body, and from the volume of substantial evidence in our possession we recommend that the charter of the Hot Springs District be revoked.

"On motion of Dr. McCauley, seconded by Dr. Green, the recommendation of the Board of Councilors was adopted, and the charter of the Hot Springs District Medical Society No. 10 is hereby revoked.

"The chair appointed the following committee to draft amendments to the by-laws to be presented at the June meeting: Drs. Wm. Edwards, J. W. Freeman, and R. D. Alway.

"On motion of Dr. Reamer, the House of Delegates adjourned *sine die*.

"(Signed)

R. D. ALWAY,
Secretary."

On motion of Dr. Hohf, seconded by Dr. Kenney, the report of the action taken at the special meetings was unanimously adopted.

Dr. Finnerud, chairman of the Medical Defense Committee, asked leave to report later, which request was granted.

A communication from the Board of Trustees of the American Medical Association was read by the Secretary, the communication embodying a plan to make the American Medical Association co-extensive with the organized profession throughout the land.

The matter was briefly discussed, and on motion of Dr. McCauley the communication was laid on the table.

On motion of Dr. Hohf, seconded by Dr. Edwards, the President was instructed to appoint a Committee on Nominations.

The president appointed the following committee:

Dr. J. M. Freeman, Lead
Dr. M. S. Hohf, Yankton
Dr. Wm. Edwards, Bowdle
Dr. E. F. Reamer, Mitchell
Dr. H. T. Kenney, Pierre
Dr. D. L. Scanlan, Brookings
Dr. F. A. Spafford, Flandreau
Dr. J. B. Vaughn, Castlewood.

The following additional committees were also appointed by the President:

Committee on Resolutions
Dr. F. A. Spafford, Flandreau
Dr. C. E. McCauley, Aberdeen
Dr. J. B. Vaughn, Castlewood.

Committee on Necrology
Dr. E. D. Putman, Sioux Falls
Dr. H. J. O'Bryan, Watertown
Dr. W. R. Ball, Mitchell.

Auditing Committee
Dr. D. L. Scanlan, Brookings
Dr. N. B. Gearhart, Pierre
Dr. C. O. Olson, Groton.

Dr. W. T. Kenney, of Pierre, submitted a report concerning the memorial prepared and issued on the death of Dr. D. L. Robinson, which report was informally approved.

On motion of Dr. Alway the House of Delegates adjourned to meet at the call of the President.

SECOND SESSION

The second session of the House of Delegates was called to order by the President at 5:30 o'clock at the Locke Hotel, June 15, 1911.

The following delegates responded to roll-call:

First District—Dr. Wm. Edwards, Bowdle; Dr. C. E. McCauley, Aberdeen; Dr. C. O. Olson, Groton.

Second District—Dr. J. B. Vaughn, Castlewood.

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. H. T. Kenney, Pierre; Dr. N. B. Gearhart, Pierre.

Sixth District—Dr. E. F. Reamer, Mitchell; Dr. W. R. Ball, Mitchell, Alternate.

Seventh District—Dr. T. J. Billion, Sioux Falls; Dr. F. A. Spafford, Flandreau.

Eighth District—Dr. S. M. Hohf, Yankton.

Ninth District—Dr. J. W. Freeman, Lead.

The President and the Secretary.

Mr. W. L. Klein, publisher of THE JOURNAL-LANCET, being present, was called upon to state the proposition he desired to submit to the Association for the publication of the transactions. Following his statement an extended informal discussion was participated in by the delegates and Mr. Klein.

On motion of Dr. E. F. Reamer, seconded by Dr. Vaughn, the Association unanimously decided to adopt THE JOURNAL-LANCET as its official organ upon the conditions stated by Mr. Klein, as follows:

The name of the South Dakota Medical Association shall appear upon the title-page of THE JOURNAL-LANCET the same as the names of the Minnesota and North Dakota Associations; that the Association be authorized to appoint an associate editor; that the Council have the power to pass upon any changes which the Minnesota Association find necessary to make, and that a contract be entered into to cover a period of five years, with the privilege of terminating it at any time for good cause, THE JOURNAL-LANCET agreeing not to question the cause. The agreement is conditioned upon an approval of the Minnesota State Medical Association at its next annual meeting.

Dr. Finnerud, as chairman, submitted the following report of the Medical Defense Committee:

REPORT OF THE MEDICAL DEFENSE COMMITTEE.

Your committee appointed to outline some plan for medical defense has discussed the matter and recommends that no action be taken at the present time. The committee is of the opinion that the Association is not large enough to make it compulsory to contribute toward a medical-defense fund on the part of the members without raising the dues to such an extent that it would work as a detriment to the Association. For that reason the committee is of the opinion that

it would be impossible to carry the plan to a successful issue at the present time.

H. M. FINNERUD,
WM. EDWARDS,
F. A. SPAFFORD,

Committee.

Dr. Edwards, on behalf of the Committee on Revision of the By-Laws, submitted the following report:

REPORT OF COMMITTEE ON REVISION OF BY-LAWS

Your committee has decided to recommend that no amendment be added to the By-Laws at the present time.

WM. EDWARDS,
J. W. FREEMAN,
R. D. ALWAY,

Committee.

On motion of Dr. R. D. Alway, the reports of both of the above committees were unanimously adopted.

On motion of Dr. Hohf the House of Delegates adjourned to meet at the call of the President.

THIRD SESSION

The third and concluding session of the House of Delegates was called to order by the President at 9 o'clock on the morning of June 16, 1911, at the Locke Hotel.

The following delegates responded to roll-call:

First District—Dr. Wm. Edwards, Bowdle; Dr. C. E. McCauley, Aberdeen; Dr. C. O. Olson, Groton.

Second District—Dr. J. B. Vaughn, Castlewood.

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. H. T. Kenney and Dr. N. B. Gearhart, Pierre.

Sixth District—Dr. E. F. Reamer and Dr. W. R. Ball (alternate), Mitchell.

Seventh District—Dr. F. A. Spafford, Flandreau.

Eighth District—Dr. S. M. Hohf, Yankton.

Ninth District—Dr. J. W. Freeman, Lead.

The President and the Secretary.

The minutes of the two previous meetings were read and, after correction, approved.

Dr. H. T. Kenney, on behalf of the Nominating Committee, submitted the following report:

REPORT OF NOMINATING COMMITTEE

We, your Committee on Nominations, beg leave to submit the following names for the various offices to be filled in the ensuing year:

President—

Dr. W. G. Smith, Hettinger.
Dr. D. L. Scanlan, Volga.
Dr. I. M. Burnside, Highmore.

First Vice President—

Dr. C. E. McCauley, Aberdeen.

Second Vice President—

Dr. F. A. Spafford, Flandreau.

Secretary-Treasurer—

Dr. R. D. Alway, Aberdeen.

Councillors:

Second District—

Dr. J. B. Vaughn, Castlewood.

Eighth District—

Dr. James Roan, Yankton.

Place of holding next annual meeting—Mitchell.

J. W. FREEMAN,
M. S. HOHF,
WM. EDWARDS,
E. T. REAMER,
H. T. KENNEY,
D. L. SCANLAN,
F. A. SPAFFORD,
J. B. VAUGHN.

Committee.

A ballot was then taken upon the nominees proposed for President. There were eleven ballots cast, of which Dr. W. G. Smith received the entire number, and he was declared unanimously elected.

On motion of Dr. Edwards, the rules were suspended and the Secretary was instructed to cast the ballot in favor of Dr. C. E. McCauley for First Vice-President, which was done, and he was declared duly elected.

On motion of Dr. Edwards, the same course was pursued in the case of Dr. F. A. Spafford, and he was declared unanimously elected Second Vice-President.

On motion of Dr. Spafford all of the rules were suspended and everybody was requested to rise and vote for Dr. R. D. Alway for Secretary-Treasurer, which everybody did, and he was declared duly and unanimously elected.

On motion of Dr. Reamer, the Secretary was instructed to cast the ballot of the Association in favor of Dr. J. B. Vaughn as Councilor of the Second District, and Dr. James Roane as Councilor of the Eighth District, which was done, and they were declared duly elected.

On motion of Dr. Edwards, Mitchell was unanimously selected as the next place of meeting.

On motion of Dr. J. B. Vaughn, the time for

the next meeting was fixed for some period in the month of May.

Dr. J. B. Vaughn, on behalf of the Committee on Resolutions, submitted the following report:

REPORT OF COMMITTEE ON RESOLUTIONS

Resolved, That the State Medical Association extend to the Pierre District Medical Society and to the physicians of Pierre our heartfelt appreciation for the cordial and hospitable entertainment tendered this body; also to the Board of Trade for their courtesy in permitting the Association the use of the Auditorium during the sessions; also to Mr. J. E. Hipple for the kind use of his building.

Resolved, That we express our appreciation for the able manner in which our president, Dr. Finnerud, has presided over the deliberations of this body during the past year and at this meeting of the Association; also for the efficient work rendered by the State Secretary, Dr. Alway.

Resolved, That we express to the auxiliary body of this Association, composed of the wives of members, our appreciation of their presence, and convey to them our best wishes; also that we express our sincere thanks to the citizens of Pierre for the many courtesies which have added materially to our comfort and pleasure while guests of the city.

J. B. VAUGHN,
F. A. SPAFFORD,
C. E. McCAULEY.

Committee.

On motion of Dr. Alway, the report of the committee was adopted and the committee discharged.

On motion of Dr. Hohf, the committee appointed at the previous annual meeting, consisting of Drs. Spafford, Lavery, and Alway, to secure and tabulate the professional civic records of members of the Association, was continued to serve during the ensuing year.

Dr. Wm. Edwards, as chairman, submitted the proceedings as the report of the Council to the House of Delegates.

On motion of Dr. Freeman, the report of the Council was adopted.

On motion of Dr. Freeman, the House of Delegates adjourned *sine die*.

PROCEEDINGS OF THE BOARD OF COUNCILORS

The first meeting of the Council was called to order by President Finnerud in the absence of Chairman Edwards, in Room 300, of the Locke Hotel, at 6:30 o'clock on the evening of June 14, 1911.

The roll-call showed the following councilors present:

First District—Dr. Wm. Edwards, Bowdle.

Second District—

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. N. B. Gearhart.
 Sixth District—
 Seventh District—Dr. F. A. Spafford, Flan-
 dreau.

Eighth District—

Ninth District—

The President and the Secretary.

The financial report of the Secretary-Treasurer was submitted as follows:

FINANCIAL STATEMENT

Receipts.

Sept. 30, 1910, balance on hand.....	\$652.56
Nov. 29, 1910, per capita dues Dist. No. 9.....	6.00
Nov. 27, 1910, per capita dues Dist. No. 6.....	3.00
Jan. 1, 1911, per capita dues Dist. No. 2.....	6.00
March 23, 1911, per capita dues Dist. No. 1...	27.00
March 30, 1911, per capita dues Dist. No. 3...	12.00
April 1, 1911, per capita dues Dist. No. 8.....	111.00
April 1, 1911, per capita dues Dist. No. 4.....	42.00
April 2, 1911, per capita dues Dist. No. 7.....	87.00
April 2, 1911, per capita dues Dist. No. 9.....	96.00
April 2, 1911, per capita dues Dist. No. 2.....	87.00
April 4, 1911, per capita dues Dist. No. 8.....	6.00
April 5, 1911, per capita dues Dist. No. 8.....	3.00
April 6, 1911, per capita dues Dist. No. 6.....	81.00
April 8, 1911, per capita dues Dist. No. 2.....	3.00
April 11, 1911, per capita dues Dist. No. 8....	3.00
April 13, 1911, per capita dues Dist. No. 1....	190.00
April 15, 1911, per capita dues Dist. No. 1....	15.00
May 13, 1911, per capita dues Dist. No. 6.....	15.00
June 4, 1911, per capita dues Dist. No. 9.....	6.00
June 8, 1911, per capita dues Dist. No. 1.....	28.00
June 14, 1911, per capita dues Dist. No. 7....	15.00
	<u>\$1,494.56</u>

Disbursements.

Sept. 29, 1910, warrant No. 29.....	\$5.00
Sept. 28, 1910, warrant No. 30.....	22.50
Sept. 28, 1910, warrant No. 31.....	7.00
Sept. 28, 1910, warrant No. 32.....	150.00
Sept. 28, 1910, warrant No. 33.....	88.00
Sept. 28, 1910, warrant No. 34.....	47.95
Sept. 28, 1910, warrant No. 35.....	24.00
Oct. 30, 1910, warrant No. 15.....	100.00
Feb. 4, 1911, warrant No. 16.....	13.75
March 15, 1911, warrant No. 17.....	241.25
May 30, 1911, warrant No. 18.....	17.50
May 30, 1911, warrant No. 19.....	21.00
	<u>\$737.95</u>

Recapitulation.

Receipts	\$1,494.51
Disbursements	737.95
Balance	<u>\$756.61</u>

R. D. ALWAY,
 Secretary-Treasurer.

On motion of Dr. Spafford, the report of the Treasurer was referred to the Auditing Committee.

A bill for postage to the amount of \$25.80 was presented by the Secretary, and also a bill from the State Publishing Co., Pierre, for \$10

for printing and memorial folders in memory of Dr. Robinson.

On motion of Dr. Edwards, both bills were ordered paid.

The Secretary referred to the condition of the Third District Society, and on motion of Dr. Alway, Drs. Finnerud and Spafford, with Dr. D. L. Scanlan, Councilor of the Third District, were directed to go to Brookings to endeavor to effect a reorganization of that district, any expenses incurred to be paid out of the treasury of the State Association.

On motion of Dr. Hohf, it was decided to offer the suggestion to the Huron physicians that they create a society of their own to include Beadle County, and that in such an event a charter be granted them.

SECOND MEETING

The second meeting of the Council was called to order at 6:30 o'clock, June 15, 1911, at the Locke Hotel, by President Finnerud.

The following Councilors responded to roll-call:

First District—Dr. Wm. Edwards, Bowdle.

Second District—Dr. J. B. Vaughn, Castlewood.

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. N. B. Gearhart, Pierre.

Sixth District—Dr. W. R. Ball (alternate), Mitchell.

Seventh District—Dr. F. A. Spafford, Flan-
 dreau.

The President and the Secretary.

The minutes of the previous meeting were read by the Secretary and approved.

Dr. Scanlan, chairman of the Auditing Committee, submitted the following report:

REPORT OF AUDITING COMMITTEE

We, the Auditing Committee, have examined the Treasurer's accounts and find the same correct.

D. L. SCANLAN,
 N. B. GEARHART,
 C. O. OLSON,

Committee.

On motion of Dr. Edwards the report was unanimously adopted and the committee discharged.

On motion of Dr. Alway, the sum of \$50 was appropriated to be used toward defraying the expenses of Dr. Smiley, State delegate to the meeting of the American Medical Association to be held at Los Angeles.

On motion of Dr. Scanlan, the Council adjourned.

THIRD SESSION

The third and final session of the Council was called to order at 9 o'clock on the morning of June 16, 1911, at the Locke Hotel by President Finnerud.

The following Councilors responded to the roll-call:

First District—Dr. Wm. Edwards, Bowdle.

Second District—Dr. J. B. Vaughn, Castlewood.

Third District—Dr. D. L. Scanlan, Volga.

Fourth District—Dr. N. B. Gearhart, Pierre.

Sixth District—Dr. W. R. Ball (alternate), Mitchell.

Seventh District—Dr. F. A. Spafford, Flan-dreau.

The President and the Secretary.

The minutes of the previous meeting were read and approved.

On motion of Dr. Spafford the sum of \$200, or as much as may be needed, was appropriated to defray the expenses of the special meeting

of the House of Delegates held at Pierre, February 21, 1911, one-half to be paid the current year and the remaining half the following year.

On motion of Dr. Edwards, it was ordered that the Secretary be paid \$150 for his services during the previous year.

On motion of Dr. Edwards, the Secretary was instructed to pay Mr. A. G. Long, the official stenographer, for his services and expenses at this meeting as per contract.

On motion of Dr. Spafford, Dr. Wm. Edwards was elected Chairman of the Council for the ensuing year.

On motion of Dr. Edwards, Dr. J. B. Vaughn was re-elected Secretary of the Council for the ensuing year.

On motion of Dr. Spafford, Dr. R. D. Alway was appointed Associate Editor of THE JOURNAL-LANCET, in accordance with the proposition submitted by the publisher, Mr. Klein.

On motion of Dr. Edwards, the Council adjourned *sine die*.

DISTRICT AND COUNTY ROSTER

ABERDEEN DISTRICT MEDICAL SOCIETY—NO. 1

PRESIDENT

Clemons, E. J. Aberdeen

SECRETARY

Adams, J. F. Aberdeen

Adams, B. A. Bristol
Alway, R. D. Aberdeen
Bailey, F. C. Redfield
Baldwin, F. M. Redfield
Button, A. J. Mobridge
Beil, A. Selby
Brousseau, J. E. Frankfort
Brown, A. E. Conde
Bruner, J. E. Frederick
Carpenter, G. S. Bowdle
Carson, D. J. Faulkton
Clark, L. W. Onaka
Cook, F. D. J. Langford
Countryman, G. E. Aberdeen
Crain, F. M. Redfield
Creamer, Frank H. Dupree
Deertz, J. J. Ashton
Dinsmore, W. E. Claremont

Donnelly, W. H. Aberdeen
Edwards, Wm. Bowdle
Farrell, W. D. Aberdeen
Ferguson, W. J. Milbank
Geib, D. Groton
Gerdes, O. H. Eureka
Ground, H. T. Aberdeen
Gundermann, R. H. Selby
Harris, H. G. Wilmot
Harris, J. L. Webster
Herman, H. J. Webster
Herman, J. D. Conde
Hoagland, C. C. Veblen
Holmes, A. E. Verdon
Holmes, Chas. F. Hecla
Hill, Robert. Ipswich
Hurley, S. E. Gettysburg
Jenkins, P. B. Waubay
Johnston, M. C. Aberdeen
Jones, J. D. Groton
Jones, R. R. Britton
Kearns, G. G. Leola
Kettner, J. C. Leola
King, H. I. Aberdeen

Kjerland, T. N. Webster
Kriesel, W. A. Watertown
Kruideneir, A. B. Aberdeen
Kutnewsky, J. K. Redfield
Martin, John H. Lead
McCauley, C. E. Aberdeen
Mertens, J. J. Hoven
Miller, E. O. Aberdeen
Miller, Frank. Aberdeen
Miller, V. M. Mellette
Mitchell, Fred L. Orient
Murdy, B. C. Aberdeen
Murdy, R. L. Aberdeen
Olson, C. O. Groton
Olson, C. L. McIntosh
Peabody, P. D. Webster
Pickering, L. A. Aberdeen
Potter, Geo. W. Redfield
Rock, H. J. Aberdeen
Sampson, I. J. Mellette
Sorenson, A. A. Aberdeen
Sverri, Ingemann. Sisseton
Thompson, John R. Northville
Whiteside, J. D. Aberdeen

WATERTOWN DISTRICT MEDICAL SOCIETY—NO. 2

PRESIDENT

O'Toole, C. S. Vienna

SECRETARY

Vaughn, J. B. Castlewood
Ash, J. C. Garden City
Bartron, H. J. Watertown
Benner, W. J. Willow Lakes
Burleigh, G. H. Estelline
Campbell, R. F. Watertown
Chapman, W. S. Raymond

Church, O. E. Revillo
Crawford, J. H. Castlewood
Dickinson, S. B. Watertown
Eddy, J. S. Henry
Ely, O. S. Wallace
Finnerud, H. M. Watertown
Freeburg, H. M. Watertown
Frink, O. G. South Shore
Hart, R. S. Hazel
Hendricson, Paul. Vienna
Hill, L. G. Watertown

Leach, W. O. Carpenter
Magee, W. G. Watertown
McIntyre, P. S. Bradley
Mullen, R. M. Florence
O'Bryan, H. J. Watertown
Parsons, H. C. Watertown
Ramsey, E. T. Clark
Schwendener, J. E. Bryant
Sherwood, H. W. Doland
Suddard, G. W. Hayti
Tarbell, H. A. Watertown

BROOKINGS DISTRICT MEDICAL SOCIETY—NO. 3

Green, B. T. Brookings
Hopkins, N. K. Arlington

Scanlan, D. L. Volga
Torwick, E. E. Volga

PIERRE DISTRICT MEDICAL SOCIETY--NO. 4

PRESIDENT
Hollister, C. M. Pierre

SECRETARY
Walsh, J. M. Fort Pierre

Burnside, I. M. Highmore
Gearhart, N. B. Pierre
Hort, B. M. Blunt
Hyde, S. M. Philip
Kenney, H. T. Pierre
Lane, W. H. Miller

Lavery, Chas. J. Fort Pierre
Minard, Ralph W. Midland
Riggs, T. F. Pierre
Schub, A. T. Copa
Wallis, S. R. Miller
Youngs, A. H. Pierre

MITCHELL DISTRICT MEDICAL SOCIETY--NO. 6

PRESIDENT
Jones, E. W. Mt. Vernon

SECRETARY
Ball, W. R. Mitchell
Berfield, Clyde. Plankinton
Bobb, B. A. Mitchell
Bobb, C. S. Mitchell
Bower, Chas. A. Mitchell
Buffaloe, A. J. Mitchell
Clauser, G. A. Bridgewater
Deily, H. C. Emery

Freyberg, F. W. Mitchell
Homan, Chas. H. Aberdeen
Howard, J. A. Ethan
Hoyne, A. H. Salem
Jenkinson, H. E.
Wessington Springs
Just, Guy H. Pukwana
Kidd, F. S. Woonsocket
Kimble, Olin A. Murdo
Langly, C. S. Lake Andes
LaShier, B. W. Armour

Pherrin, O. D. Stickney
Ramsey, Guy. Salem
Reamer, E. F. Mitchell
Schofield, H. B. Parkston
Silberstein, Julius. Crow Creek
Smiley, T. B. Mt. Vernon
Sprecher, Samuel. Tripp
Templeton, C. V. Woonsocket
Treon, Fred. Chamberlain
Wager, E. N. Bijou Hills
Waldner, J. L. Parkston

SIOUX FALLS DISTRICT MEDICAL SOCIETY--NO. 7

PRESIDENT
Bliss, G. W. Valley Springs

SECRETARY
Parsons, J. G. Sioux Falls

Bates, G. W. Valley Springs
Billion, T. J. Sioux Falls
Bower, C. F. Hartford
Brown, S. A. Sioux Falls
Butler, C. A. Dell Rapids
Cottam, G. G. Sioux Falls
Craig, D. W. Sioux Falls
Culver, C. F. Sioux Falls

Devall, F. C. Garretson
Dott, R. T. Salem
Egan, M. H. Sioux Falls
Formis, J. K. Lennox
Gage, E. E. Montrose
Grove, M. M. Dell Rapids
Houseman, W. McK. Dell Rapids
Keller, S. A. Sioux Falls
Keller, W. F. Sioux Falls
Klaveness, E. Sioux Falls
Morrison, C. W. Canton
Nessa, N. J. Sioux Falls
Perkins, E. L. Sioux Falls

Putnam, E. D. Sioux Falls
Putnam, F. I. Sioux Falls
Roberts, T. S. Sioux Falls
Roberts, W. P. Sioux Falls
Rundlett, D. L. Sioux Falls
Sawyer, O. O. Dell Rapids
Schwartz, Jos. Sioux Falls
Sherwood, H. H. Humbolt
Skogen, T. T. Flandreau
Spafford, F. A. Flandreau
Stevens, R. G. Sioux Falls
Tufts, A. H. Sioux Falls
Van Demark, G. E. Sioux Falls

YANKTON DISTRICT MEDICAL SOCIETY--NO. 8

PRESIDENT
Koobs, H. J. G. Scotland

SECRETARY
Roane, James. Yankton

Adams, G. S. Yankton
Anderson, E. T. Platte
Beall, L. F. Irene
Berry, S. G. Tyndall
Blezek, F. M. Tabor
Burkland, P. R. Vermillion
Collisi, Nicolas. Vermillion
Cruckshank, Thos. Vermillion
Duguid, J. O. Springfield

French, H. E. Vermillion
Frink, R. P. Wagner
Greenfield, J. C. Avon
Gross, C. C. Yankton
Gyllenhammar, F. N. H. Gayville
Herron, D. A. Platte
Hohf, J. A. Tripp
Hohf, S. M. Yankton
Kalayjian, D. S. Parker
Keeling, C. N. Springfield
Kenaston, H. R. Bonesteel
Kershaw, R. B. Yankton
Livingston, H. F. Yankton
Lloyd, J. C. Platte
Meade, L. C. Yankton

Melgaard, B. A. Volin
Moore, D. V. Yankton
Moore, F. A. Lesterville
Moore, W. E. Sioux Falls
Morehouse, E. M. Yankton
Murphy, Jennie C. Yankton
Peterman, A. L. Parker
Rudgers, D. W. Yankton
Seapy, J. A. Geddes
Sedlacek, F. A. Tyndall
Stewart, J. L. Viborg
Stuart, F. I. Wagner
Swezey, F. A. Wakonda
Struble, A. J. Centerville
Willhite, T. V. Yankton

BLACK HILLS DISTRICT MEDICAL SOCIETY--NO. 9

SECRETARY
Howe, F. S. Deadwood

PRESIDENT
Vercoe, W. L. Lead

Allen, A. G. Deadwood
Ashcroft, F. E. Deadwood
Babcock, L. F. Deadwood
Ballou, Jesse. Lead
Bently, W. S. Hot Springs
Bickford, W. M. Lead
Carr, A. Hill City
Clough, F. E. Lead

Fehlman, W. E. Lead
Freeman, J. W. Lead
Graham, R. P. Wasta
Green, J. W. Lead
Hargens, C. W. Hot Springs
Hodges, V. R. Terry
Holvey, R. E. Lead
Jackson, R. J. Rapid City
Jennings, R. D. Hot Springs
Long, Martin. Custer
Minty, F. W. Rapid City
Moffitt, T. W. Deadwood

Moore, L. S. Lead
Nilsson, J. R. Lead
Raber, D. D. Rapid City
Richards, Chas. Sturgis
Richards, G. H. New Underwood
Robinson, W. E. Rapid City
Ross, R. H. Pine Ridge
Schneerer, F. B. Deadwood
Smith, W. G. Sidney
Spiegelberg, E. H. Hot Springs
Swafford, E. W. Sturgis
Waldron, P. J. Rapid City

ALPHABETICAL ROSTER

Adams, B. A. Bristol
Adams, G. S. Yankton
Adams, J. F. Aberdeen
Allen, A. G. Deadwood
Alway, R. D. Aberdeen
Anderson, E. T. Platte
Ash, J. C. Garden City
Ashcroft, F. E. Deadwood

Babcock, L. F. Deadwood
Bailey, F. C. Redfield
Baldwin, F. M. Redfield
Ball, W. R. Mitchell
Ballou, Jesse. Lead
Bartron, H. J. Watertown
Beall, L. F. Irene
Beil, A. Selby

Benner, W. J. Willow Lakes
Bently, W. S. Hot Springs
Berfield, Clyde. Plankinton
Berry, S. G. Tyndall
Bickford, W. M. Lead
Billion, T. J. Sioux Falls
Blezek, F. M. Tabor
Bliss, G. W. Valley Springs

Bobb, B. A.	Mitchell	Hill, L. G.	Watertown	Murdy, R. L.	Aberdeen
Bobb, Clyde S.	Mitchell	Hill, Robert.	Ipswich	Murphy, Jennie C.	Yankton
Bower, Chas. A.	Mitchell	Hoagland, C. C.	Veblen	Nessa, N. J.	Sioux Falls
Bower, C. F.	Hartford	Hodges, V. R.	Terry	Nilsson, J. R.	Lead
Brousseau, J. T.	Frankfort	Hohf, J. A.	Tripp	O'Bryan, H. J.	Watertown
Brown, A. E.	Conde	Hohf, S. M.	Yankton	Olson, C. L.	McIntosh
Brown, S. A.	Sioux Falls	Hollister, C. M.	Pierre	Olson, C. O.	Groton
Bruner, J. E.	Frederick	Holmes, A. E.	Verdon	O'Toole, C. S.	Vienna
Buffaloe, A. J.	Mitchell	Holmes, Chas. F.	Hecla	Parsons, H. C.	Watertown
Burkland, P. R.	Vermillion	Holvey, R. E.	Lead	Parsons, J. G.	Sioux Falls
Burleigh, G. H.	Estelline	Homan, Chas. A.	Aberdeen	Peabody, P. D.	Webster
Burnside, I. M.	Highmore	Hopkins, N. K.	Arlington	Perkins, E. L.	Sioux Falls
Butler, C. F.	Dell Rapids	Hort, B. M.	Blunt	Peterman, A. L.	Parker
Button, A. J.	Mobridge	Housman, W. McK.	Dell Rapids	Pherrin, O. D.	Stickney
Campbell, R. F.	Watertown	Howard, J. A.	Ethan	Pickering, L. A.	Aberdeen
Carpenter, G. S.	Bowdle	Howe, F. S.	Deadwood	Potter, Geo. W.	Redfield
Carson, D. J.	Faultkon	Hoyne, A. H.	Salem	Putnam, E. D.	Sioux Falls
Chapman, W. S.	Raymond	Hurley, S. E.	Gettysburg	Putnam, F. I.	Sioux Falls
Church, O. E.	Revillo	Hyde, S. M.	Philip	Raber, D. D.	Rapid City
Clark, L. W.	Onaka	Jackson, R. J.	Rapid City	Ramsey, E. T.	Clark
Clauser, G. A.	Bridgewater	Jenkins, P. B.	Waubay	Ramsey, Guy.	Salem
Clemons, E. J.	Aberdeen	Jenkinson, H. E.	Wessington Springs	Reamer, E. F.	Mitchell
Clough, F. E.	Lead	Jennings, R. D.	Hot Springs	Richards, Chas.	Sturgis
Collisi, Nicolas.	Vermillion	Johnston, M. C.	Aberdeen	Richards, G. H.	New Underwood
Cook, F. D. J.	Langford	Jones, E. W.	Mt. Vernon	Riggs, T. F.	Pierre
Cottam, G. G.	Sioux Falls	Jones, J. D.	Groton	Roane, James.	Yankton
Countryman, G. E.	Aberdeen	Jones, R. R.	Britton	Roberts, W. P.	Sioux Falls
Craig, D. W.	Sioux Falls	Just, Guy H.	Pukwana	Robinson, W. E.	Rapid City
Crain, F. M.	Redfield	Kalayjian, D. S.	Parker	Rock, H. J.	Aberdeen
Crawford, J. H.	Castlewood	Keeling, C. M.	Springfield	Ross, R. H.	Pine Ridge
Creamer, F. H.	Dupree	Keller, S. A.	Sioux Falls	Rudgers, W. D.	Yankton
Cruickshank, Thos.	Vermillion	Keller, W. F.	Sioux Falls	Rundlett, D. L.	Sioux Falls
Culver, C. F.	Sioux Falls	Kenaston, H. R.	Bonesteel	Sampson, I. J.	Mellette
Deertz, J. J.	Ashton	Kenney, H. T.	Pierre	Sawyer, O. O.	Dell Rapids
Deily, H. C.	Emery	Kerns, G. G.	Leola	Scanlan, D. L.	Volga
Devall, F. C.	Garretson	Kershaw, R. B.	Yankton	Schneerer, F. B.	Deadwood
Dickinson, S. B.	Watertown	Kettner, J. C.	Leola	Schwendener, J. E.	Bryant
Dinsmore, W. E.	Claremont	Kidd, F. S.	Woonsocket	Scofield, H. B.	Parkston
Donnelly, W. H.	Aberdeen	Kimble, Olin A.	Murdo	Schub, A. T.	Copa
Dott, R. T.	Salem	King, H. I.	Aberdeen	Seapy, J. A.	Geddes
Duguid, J. O.	Springfield	Kjerland, T. N.	Webster	Sedlacek, F. A.	Tyndall
Eddy, J. S.	Henry	Klaveness, E.	Sioux Falls	Sherwood, H. H.	Humbolt
Edwards, Wm.	Bowdle	Koobs, H. J. G.	Scotland	Sherwood, H. W.	Doland
Egan, M. H.	Sioux Falls	Kriesel, W. A.	Watertown	Silberstein, Julius.	Crow Creek
Ely, O. S.	Wallace	Kruidenier, A. B.	Aberdeen	Skogen, T. T.	Flandreau
Farrrell, W. D.	Aberdeen	Kutnewsky, J. K.	Redfield	Smiley, T. B.	Mt. Vernon
Fehlman, W. E.	Lead	Lane, W. H.	Miller	Smith, W. G.	Sidney
Ferguson, W. J.	Milbank	Langly, C. S.	Lake Andes	Sorenson, A. A.	Aberdeen
Finnerud, H. M.	Watertown	LaSheir, B. W.	Armour	Spafford, F. A.	Flandreau
Formis, J. K.	Lennox	Lavery, Chas. J.	Fort Pierre	Spiegelberg, E. H.	Hot Springs
Freeburg, H. M.	Watertown	Leach, W. O.	Carpenter	Sprecher, Samuel.	Tripp
Freman, J. W.	Lead	Livingston, H. F.	Yankton	Stevens, R. G.	Sioux Falls
French, H. E.	Vermillion	Lloyd, J. C.	Platte	Stewart, J. L.	Viborg
Freyberg, F. W.	Mitchell	Long, Martin.	Custer	Struble, A. J.	Centerville
Frink, O. G.	South Shore	Magee, W. G.	Watertown	Stuart, F. I.	Wagner
Frink, R. P.	Wager	Martin, John H.	Lead	Suddard, G. W.	Hayti
Gage, E. E.	Montrose	McCauley, C. E.	Aberdeen	Sverri, Ingemann.	Sisseton
Gearhart, N. B.	Pierre	McIntyre, P. S.	Bradley	Swafford, E. W.	Sturgis
Gerdes, O. H.	Eureka	Mead, L. C.	Yankton	Swezey, F. A.	Wakonda
Graham, R. P.	Wasta	Melgaard, B. A.	Volin	Tarbell, H. A.	Watertown
Green, B. T.	Brookings	Mertens, J. J.	Hoven	Templeton, C. V.	Woonsocket
Green, J. W.	Lead	Miller, Frank.	Aberdeen	Thompson, John R.	Northville
Greenfield, J. C.	Avon	Miller, O. E.	Aberdeen	Torwick, E. E.	Volga
Gross, C. C.	Yankton	Miller, V. M.	Mellette	Treon, Fred.	Chamberlain
Ground, H. T.	Aberdeen	Minard, Ralph W.	Midland	Tufts, A. H.	Sioux Falls
Grove, M. M.	Dell Rapids	Minty, F. W.	Rapid City	Van Demark, G. E.	Sioux Falls
Gundermann, H. R.	Selby	Mitchell, Fred L.	Orient	Vaughn, J. B.	Castlewood
Gyllenhammer, T. H.	N. Gayville	Moffitt, T. W.	Deadwood	Vercoe, W. L.	Lead
Hainer, Annie B.	Sioux Falls	Moore, F. A.	Lesterville	Wager, E. N.	Bijou Hills
Hargens, V. R.	Hot Springs	Moore, L. S.	Lead	Waldner, J. L.	Parkston
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Hart, R. S.	Hazel	Morrison, C. W.	Canton	Walsh, J. M.	Fort Pierre
Hendricson, Paul.	Vienna	Mullen, R. M.	Florence	Whiteside, J. D.	Aberdeen
Herrman, J. D.	Conde	Murphy, B. C.	Aberdeen	Willhite, F. V.	Yankton
Herron, D. A.	Platte			Youngs, A. H.	Pierre

PRESIDENT'S ADDRESS

BY H. M. FINNERUD, M. D.,

WATERTOWN, S. D.

The greatest honor that you can bestow on a fellow practitioner is to elect him your president, and I thank you most sincerely for the privilege of ending a long and strenuous professional life with the memory of your kindness and your good-will.

Last year's meeting at Hot Springs was a memorable one, both on account of the general feeling among the doctors and the open-hearted hospitality of its citizens. We have every assurance of an equal welcome from the local practitioners and the hospitable citizens of peerless Pierre.

We are useful citizens of a rich and honorable State. Some of us old-timers have endured long and slow horseback rides over the endless and unsettled prairies, have endured the hot and cold winds, sunshine and blizzards, bountiful crops and crop-failures, hard times and good times; but we have loved our State and its honest, industrious, courageous, progressive, and foresighted citizens. We have all done well and have never heard any of the old practitioners express a regret, but they have always hailed with joy the sight of the ever-developing and fertile prairies after a short absence for rest, recreation, and study.

The young members of our profession are all of a class that in loyalty, contentment, and courage will go us "one better." The State is to be congratulated on such a class of citizens, and the doctors are to be congratulated on good judgment in choosing for their field of labor such a State.

Great effort is now being made by the National administration to establish a National Bureau of Health. The Owen bill, now before Congress, with certain objectionable political features eliminated, stands a fair chance of final passage, with a little personal effort on our part.

It is useless to discuss the merits of this bill, for it is generally understood and agreed that it is one of the most important measures that have ever come before Congress, considering its scientific and sanitary bearings. Its effectiveness will add materially to the length and the efficiency of productiveness of the human body and mind. If there are any members of this Association who have any influence with any of our senators and representatives at Wash-

ington, they are requested to use the same to the best of their ability.

A very important factor for public benefit, not only to the present, but future generations, would be a thorough inspection of the hygienic conditions of the public schools and a thorough physical examination of the pupils.

In the larger cities of the State, the new school buildings are being constructed with the end in view of providing plenty of fresh, warm air, but in the older school buildings no attempt had been made, either at the time of construction or later, to comply with this modern requirement. The cost of a suitable ventilating system would be so small, and the benefit to the health of the teachers and the pupils so great, that no school board can afford to neglect it from a business standpoint, if for no other reason.

When the physical condition of the pupils is such that medical or surgical treatment would benefit them, the school board should have authority to provide such medical or surgical care as may be needed.

One of the most important questions for the medical profession today is our tubercular patients. Tubercular patients are not fit persons for treatment either in their own homes or in a general hospital. Much has already been accomplished in the care of these unfortunates, but much remains to be done for the victims and for the public. It is now a well-established fact that the best results in the treatment are obtained in open-air sanitariums.

Our State has taken a step in the right direction by establishing a sanitarium at Custer, but the appropriations at the last two sessions of the legislature have been so small that it is entirely inadequate for the rapidly increasing victims of this dread disease. It is so small that it is almost useless to render any material benefit.

The average legislature realizes more keenly the need of an experiment station and the more advanced scientific methods of preventing hog-cholera than the conservation of human life by preventing the spread of this disease. Our efforts, both as an association and as individuals, must be to use our influence with the individual members of the legislature to get a larger ap-

propriation for the maintenance and extension of this important work.

During the last few years, great strides have been made in medical education, not only in the study of medicine itself, but also in the higher requirements for admission to the medical school. Much is still lacking to make our medical colleges what they ought to be. First, a more effective course of literary college work, at least two years in a well-equipped college and university, should be required before entering on the study of medicine. After that, four years of medical study, and, finally, one year of compulsory internship in a first-class hospital should constitute the requirement for a well-qualified physician. A man having passed this requirement with a rigid examination, both practical and theoretical, ought to be a safe man to turn loose on a confiding public. In spite of the fact that medical education has made marked progress in the larger medical schools, we are still far from being safe with so many of the small medical colleges giving diplomas to incompetent men.

The effort of the American Medical Association to standardize college work should be encouraged, and our hope is, that this and other similar organizations may accomplish what state laws, made and unmade by state legislatures, never will.

The greatest safeguard of professional efficiency is a state or national board of examiners, and a fair and intelligent examination before such a board will soon determine whether the candidate is qualified for his important vocation. Such competency has not in the past been fully ascertained by our State Board. The examination has always been purely theoretical. In this age of scientific medicine, the examination ought to be, first, a theoretical examination; second, a scientific examination, covering chemical and microscopic work, such as the examination of blood, urine, sputum, etc.; and, third, a bedside examination in diagnosis, all under the supervision of the Board. As both our University and Agricultural College are well equipped with scientific appliances for such work, there is no reason why the State Board could not exact such an examination.

So long as such a board is a political body, it will necessarily depend on the executive whether or not the examining board will continue to be an honest and efficient one.

At the last session of our legislature the State

Board of Health received a larger appropriation, about enough to meet the necessary expense of the Board, but not sufficient to carry out any investigation or research work. The money needed for such a laudable project was set aside to indemnify the owners of glandered horses killed to protect communities from further infection. Although that feature is not without merit, the same amount of money expended for the purpose of investigating, treating, and isolating contagious and infectious diseases in the human body would have been of greater economic value to the State.

There is a law in this State licensing itinerant or traveling doctors, but it has been a dead letter. Until recently these men have made their periodical visits all over the State, collecting fat fees in advance from our bountiful crop of ignorant and confiding hypochondriacs. A previous examining board undertook to stop the practice, but could get very little help from local practitioners. Recently, however, a set of such traveling fakers were arrested and convicted at Milbank and had to get a license. As the cost of a license is a small incidental, compared with the amount of money these fakers collect from the gullible public, such penalty is inadequate to fit the magnitude of the crime. That section of the law granting an itinerant license ought to be repealed, and itinerancy in medicine and surgery ought to be made a misdemeanor punishable by fine and imprisonment, except in the case of physicians and surgeons who maintain bona-fide residences and are citizens of the State.

At our last meeting, a committee consisting of Dr. Edwards, Dr. Spafford, and your President, was elected to incorporate a physicians' defense association. At the time there existed a marked difference of opinion among the physicians as to whether it should be an independent and separate organization to which only members of the State Association would be eligible, or whether membership in the State Association would confer membership in the organization. The profession as a whole seemed very indifferent towards such an organization, and, in our judgment, it would only result in failure.

In closing, your attention is directed to the necessity of a loyal interest in your medical societies, district and state, and the A. M. A. There has never been an organization where so much work has been expended with so little re-

sult. A physician is always busy and unable to delegate his work to others, and he often finds it a hardship to attend these meetings, and often has a good and valid excuse; but the benefit, both scientific and financial, will more than compensate him for his time and effort. All other

professions and all labor-unions have strong organizations, and have done a great deal towards improving the material welfare of the members. Our medical organization, if loyally attended and supported, will benefit us to a much greater extent.

GERMAN MEASLES, MEASLES PROPER, AND SCARLET FEVER: THE OFFICIAL VIEW

H. W. HILL, M. D., D. P. H.

Director, Division of Epidemiology, Minnesota State Board of Health

MINNEAPOLIS

The recent (April, 1911) widespread outbreak of German measles has been instructive: first, as indicating great confusion in the minds of the laity concerning the identity or non-identity of these two diseases; and, secondly, as indicating, especially amongst the younger generation of medical men, some uncertainty concerning the same points.

Much mild scarlet fever has existed. The existence and characteristics of the fourth disease (Duke's disease) also comes into the question, while the recent extraordinary statement of the Illinois State Board of Health Monthly Bulletin (No. 2, February, 1911, p. 91) that "*Duke's disease is a name given to mild cases of scarlet fever which occurred in Chicago in January, 1907*", lends a flavor of humor to the whole situation.

Nettle rash, despite the present early stage of the season, stomach rash, scarlet rash, even prickly heat, are terms not uncommonly encountered, yet when the disease so designated is accompanied by fairly definite and characteristic prodromes, definite rise of temperature, more or less prolonged course, and subsequent desquamation, one may be pardoned for suggesting that, to put it very mildly, considerable looseness in terminology has crept into the situation.

In approaching a diagnosis of a condition characterized by rash, one should have in mind at least the following possibilities:

1. Frank scarlet fever.
2. Mild scarlet fever.
3. Frank measles proper.
4. Mild measles proper.
5. Severe German measles.
6. Ordinary German measles.
7. Duke's disease—measles type.
8. Duke's disease—scarlatinal type.
9. Smallpox (in the earliest stage of eruption, or when exhibiting a prodromal rash).

I am presuming the elimination of drug-rashes, the prodromal rashes of certain types of

the exanthemata, shell-fish, strawberry, and other stomach rashes, not on inspection alone, nor on the short-measure clinical history to be had from the patient or his friends, but after continuous study of the case by the physician himself, and a review of all the evidence *after the evidence is available and has been collected*. In many of these cases a diagnosis at an early stage is a prognostic guess, because at that time the total evidence is not in, and therefore a diagnosis cannot be made at all. Too often no real diagnosis is made at any time, the prognostic guess of the physician who sees the case once for a few minutes early in the attack being the sole designation given to the attack. The recklessness of diagnosing such cases without seeing the patient, even when the case is described by a physician, must be fully recognized. The recklessness shown in diagnosing such a case on the description of lay friends of the patient alone is not easily painted in words.

Concerning the recognition of frank cases of scarlet fever, measles, and German measles, I shall say nothing. Light cases of German measles can hardly be recognized, since a physician does not often see even those which may be called severe, and seldom those of ordinary type, except for diagnosis, treatment being rarely called for. My point is rather to establish the existence of at least three very distinct diseases (scarlet fever, measles proper, and German measles), and to suggest watchfulness for the alleged fourth, or Duke's, disease.

Briefly, then, be it said that there are no absolute pathognomonic signs for the mild forms of scarlet fever; hence the recognition of such mild forms, and their isolation until recovery, is often a matter rather of shrewd judgment concerning the epidemiology of the situation than of actual diagnosis. The careful man, anxious to

prevent spread of infection, will recognize the undoubted existence of and search carefully for evidences of "abortive cases" of scarlet fever amongst all exposed to frank cases, and will regard as suspicious all showing any trace of similarity, especially in prodromes, throat, and tongue, to scarlet fever, regardless of the presence or absence of rash. In searching for such cases, the securing of the history of previous scarlet fever in the same person is of the greatest value. This is a wholly logical proceeding. We now know that abortive cases of diphtheria, and even infected throats without reaction of any kind, exist and are prevalent in outbreaks of frank diphtheria. In diphtheria, abortive cases and infected well persons can be detected by cultures, which are not available in scarlet fever, but this inability to push the recognition of mild scarlet fever to a final conclusion by culture is no reason for neglecting to push the recognition of such cases as far as clinical and epidemiological investigation will permit. The medical profession has recognized the existence of abortive cases of poliomyelitis, although that disease has not been shown to be contagious. Surely, the recognition of abortive scarlet fever, a preeminently contagious disease, presents smaller difficulties in belief and no greater difficulties in diagnosis.

Exactly similar statements apply to measles proper, except that Koplik's spots are accepted as pathognomonic. These exist in the prodromal stage and are not readily identified after the disease is well developed; hence, unless mild cases are seen very early, they cannot be recognized on the basis of Koplik's spots alone. Epidemiological evidence concerning the exposure of the patient and the previous history as to a preceding attack of measles, must be considered. Here is encountered the difficulty that the public and even the profession frequently fail to distinguish between German measles and measles proper; therefore such history of a previous attack of "measles" may mean measles proper or German measles—and the distinction is essential.

The distinction between light measles proper and German measles can be made through the presence or absence of Koplik's spots, if the patient is seen at the right time. Failing this, the symptom-complex or clinical picture must be estimated in the light of the epidemiological situation.

Duke's disease may be described, for clinical recognition, as German measles in which the rash is scarlatiniform rather than "measley."

Here, again, the differentiation, apart from epidemiological evidence, as to exposure and the previous attacks suffered by the patient, is difficult, and authorities are divided on the question of the existence of Duke's disease as a distinct entity. Alleged Duke's disease accompanied by the prodromes, throat, and tongue of scarlet fever, cannot be safely regarded as other than scarlet fever; and such a diagnosis, while perhaps not invariably correct, is the only proper diagnosis, if frank scarlet fever appears in the history of exposure or exists in the neighborhood. On the other hand, a case clinically German measles, with a history of exposure to German measles and no scarlet fever about the neighborhood, need not be diagnosed as scarlet fever merely because the rash is scarlatiniform, instead of "measley." Such cases may be called Duke's disease. They should be isolated, and especially should be shut out of school, Sunday-school, etc. The measley type of Duke's disease is simply German measles.

To show that German measles and measles proper are as distinct as are chickenpox and smallpox, is not difficult. The following series of statements appear to cover this point:

1. That measles proper protects against a subsequent attack of measles proper, as a rule. Cases have been established where measles proper has occurred more than once in the same person, but, undoubtedly, in many of the alleged instances of dual attacks, one of the attacks only has been measles proper, the other German measles.

2. That scarlet fever protects against scarlet fever, although dual attacks have undoubtedly occurred.

3. That German measles protects against German measles, satisfactory evidence as to dual attacks not existing, although by analogy it is more than likely that they occasionally occur.

4. That some studies of Duke's disease seem to indicate that it protects against itself, but that the evidence is scant, perhaps as much because of the uncertainty or negligence in detecting it at all as for any other reason.

5. That no one of the diseases—scarlet fever, measles proper, or German measles—protects against either of the other two. The evidence concerning Duke's disease is scant, but it would appear that it does not protect against scarlet fever or measles, or *vice versa*. Whether or not it protects against German measles is also not established.

For all these reasons, therefore, the diagnosis between measles proper and German measles, is

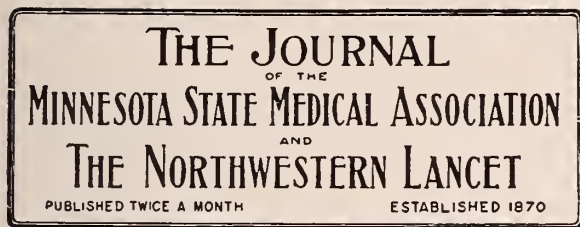
of the greatest importance. If the physician who makes a conclusive diagnosis of any one of the diseases above listed would distinguish on his records and supply to the families concerned a record which could be presented as evidence on the subject, a valuable advance in public health data and also in clinical evidence would be provided for. Schools should require from their pupils a list of the diseases such pupils have already suffered from; and to this list should be added such new infections as they receive from time to time. The attempts already made in this state to secure such data from schools have resulted in remarkably instructive and practically useful results.

In actual diagnosis the difficulties are encountered almost wholly in the early stages of frank cases, and in mild cases. A knowledge of the previous diseases the patient has suffered from are of the greatest value in elimination, or in aiding elimination.

Measles proper is as important a disease as

scarlet fever. In Great Britain the deaths properly attributed to measles are three times the number of deaths attributable to scarlet fever, and in this country there is no doubt in the minds of the leading enquirers that measles does at least as much sum total damage as scarlet fever, although, case for case, it may perhaps be less harmful. In other words 100 cases of measles may perhaps show less disability and death than 100 cases of scarlet fever; but if measles is four times as prevalent, certainly 400 cases of measles will show more disability and death than 100 cases of scarlet fever.

Finally, one definite policy should be followed by physicians and health officers with regard to dubious cases, namely, that where there is a question as to whether or not a given condition belongs in the quarantinable or isolatable group, the public is entitled to the benefit of the doubt, *i. e.*, the case should be isolated until the diagnosis is clear, and reported as suspicious in the meantime.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

July 15, 1911

OUR RELATION TO THE STATE MEDICAL ASSOCIATIONS OF MINNESOTA, NORTH DAKOTA AND SOUTH DAKOTA

For over forty years this paper, under the name THE NORTHWESTERN LANCET and under its present title, has been the *recognized* journal of the Northwestern medical profession, and it has done much, not only to develop the extensive medical literature of the Northwest, which is a splendid monument to the profession, but to establish the high standing of our medical men, evidenced in the medical-practice acts of Minnesota and the Dakotas, in the educational requirements for graduation in medicine from the University of Minnesota, and in the excellence of the preliminary medical work done in the Universities of North and South Dakota.

For many years it has been the desire of the editors that this journal should become the *official* representative of the entire Northwestern profession, thus uniting the medical men of this great new empire in a combined effort for the further advancement of the profession and for greater service on the part of the profession to the public. That such a union of effort is not only desirable, but is inevitable, must be apparent to all thoughtful men, and for many reasons, among which are the perfect community of medical interests in these states and the close

relations of the medical men, so many of whom are graduates of the University of Minnesota, from both the academic and the medical department.

Even though we saw clearly the course of events, we could do little to hasten an alliance between the professions of these states other than to make a journal capable of doing the work liable at any time to fall to its lot. Quite unexpectedly, in May last, President Healy and the Publication Committee of the North Dakota Association invited us to send a representative to the annual meeting of their Association to confer with them upon the matter of making the paper their official journal.

But before considering the details and the outcome of this conference, we desire to make an explanation to our Minnesota readers. As known to all of them, this journal has been for several years under the sole editorial management of the Minnesota Association. When the arrangement was made, the name of the journal was changed to its present title, the words THE NORTHWESTERN LANCET being retained to preserve the identity of the paper, which had been published under such name for over a third of a century. The present name is comprehensive, but it is also "impossible." Because of the latter fact the paper has come to be known, quite generally, as THE JOURNAL-LANCET. In order to curtail the title, the Minnesota Association passed a resolution at its last annual meeting (October, 1910) to drop the words *The Northwestern Lancet*. After the adjournment of the Association, it was discovered that the motion created a problem very perplexing and very difficult of solution, for compliance with the resolution seemed quite impossible because of postal regulations and also because the change in name meant a transfer of valuable property-rights in the paper to the Association, which was not contemplated in the resolution. The change of name also meant the curtailment of the journal's field and influence, and later events have shown, we think, how unwise this action would have been.

In order to solve the problem thus raised, the Council of the Minnesota Association was convened, and after full discussion reached a unanimous decision to continue relations with the paper, without a change of name, until the next annual meeting of the Association, in October of the current year.

We may now return to the conference with

the North Dakota Association. In the absence of an accessible authorized committee or body of the Minnesota Association to deal with the subject, the editor attended the meeting as the representative of the journal. The Publication Committee of the North Dakota Association reported that, in their opinion, the publication of an annual volume of transactions is undesirable and inadequate; and they recommended that some arrangement be made with this paper, and to this end they had invited a proposal from us. Although the editor felt confident that the Minnesota Association would sustain him in any action taken which was clearly for the advancement of the interests of the Northwestern profession, nevertheless he did nothing without the proviso that all that he did should be subject to the approval of the Minnesota Association.

The North Dakota Association met us with no conditions under which an alliance must be made, and they made no demands whatever. The editor felt that he could propose only such terms as a generous body of medical men in Minnesota would extend to a self-respecting body of brother practitioners in North Dakota, and this feeling suggested the terms offered. The terms are, in substance, that the name of the paper shall be changed to *THE JOURNAL-LANCET*, that the North Dakota Association shall elect an associate editor, and that the paper shall be sent to all voluntary subscribers from the North Dakota Association at the price paid by members of the Minnesota Association, the management of the paper to remain with the Minnesota Association, as at present. The terms were accepted unanimously, and the belief was expressed that such relation can be made of great benefit to the entire profession of the Northwest.

The South Dakota Association held its annual meeting in June. As the editor was unable to attend the meeting, because of the nearness of the meeting of the A. M. A. at Los Angeles, the publisher went to Pierre to make to that Association a similar offer. The South Dakota Association had long felt that an annual volume of transactions was unsatisfactory, and they unanimously accepted the offer made.

The North Dakota Association elected its secretary, Dr. H. J. Rowe, as the associate editor, and the South Dakota Association also elected its secretary, Dr. R. D. Alway, as its associate editor.

In due time we hope a similar offer may be made to the Montana Association, and with the

acceptance of the terms by the Minnesota Association, we feel that the profession of the Northwest will enter upon a new era of usefulness, and out of the stimulus to generous rivalry to accomplishment in service to the public, the profession itself will gain no small advantage.

THE LOS ANGELES MEETING OF THE A. M. A.

Californians are justly noted for their activity, enthusiasm, and an ability to entertain. The members of the American Medical Association, at the meeting held at Los Angeles, June 26-30, experienced and accepted favors and gratuities that would have tried the souls other than those of California.

To those who traveled from the East to the West there was no question of doubt, for they were received and welcomed at stations and homes with open arms. When trains arrived in Los Angeles, local medical men met and directed the strangers and not infrequently conveyed them to hotels and lodging-places. Everywhere there was open hospitality, even the much-maligned cold-blooded hotel clerk entered into the spirit of this far-Western meeting. The weather man was consistent and conservative. The sun shone, as the sun should in day-time, warm, but not too warm, and the evenings and nights were delightfully cool. No wonder the people who thought they were old in the East looked young in the West and dropped their cares and worries.

The ground was dry and the uncared-for land was brown in contrast to the oases of green surrounding the homes of those who have water for sprinkling.

The flood of entertainments was furnished so lavishly that other cities that attempt to follow the example set by Los Angeles, will find the task hopeless. The only criticism heard was that too much had been done in the way of entertainment. Every one, except the hosts, were physically tired, yet it was all very delightful.

Imagine a town that would provide automobile rides for thousands, trips to Catalina Islands for 1,600, trolley-rides for miles in special trains to the beaches where everything, including dinners at palatial hotels, was freely offered, and, greatest of all, was the great barbecue at the wonderful Busch Sunken Gardens, with valleys and hills, shrubs, flowers, fruits, and green carpets covering hundreds of acres, and

then the tent where it was estimated that 7,500 people were fed on barbecued animals and where "hot tamales" and other Spanish foods were provided; where strawberries were given out, sometimes taken out, by the quart—great luscious fellows; where beer was consumed from the original bottle that came to the Gardens in carloads! Can you see it and feel it?

Then, to see a real chariot race and a genuine polo game. Evening entertainments, dinners, lawn parties on the superb grounds of Dr. Barlow, and an alfresco musicale on Dr. Bridge's generous front lawn!

There were many other things I cannot remember,—a luncheon given by the Minnesota alumni for the visiting Minnesota men of whom there are forty or more registered on my mind. Unfeeling friends will say that a cocktail followed by sauterne is not conducive to exact expression, but when one breathes the air of California one is apt to be careless of exactness, and the imagination soars to unattainable heights. People in the West talk in large figures. They can't help it—it is part of their existence, but they are a good lot, and we all had a good time.

THE GENERAL PROGRAM

Owing to the great distance from the medical centers in the middle east and the Atlantic Coast the program was not as long as usual, but long enough. Many of the sections were not fully represented in numbers, but the quality of the papers was interesting and attractive, as well as scientific. Many men on the program who promised papers did not appear. They were afraid of the long journey, evidently, hence the programs were shorter, and more opportunities were opened for discussion.

Los Angeles inaugurated a new scheme, which should be adopted at every meeting,—that of filling the pulpits on Sunday with physicians who could talk on public health. The federation of ministers, together with a committee of medical men, had talked the situation over, and as a result of their arguments, sixty churches decided to invite physicians to talk to their congregations. On Sunday, June 24th, this novel plan was first employed. Physicians talked of the value of public health, the efforts of the health-authorities to stamp out communicable diseases, the work of the American Medical Association in its various departments, particularly the Department of Education and the Council of Chemistry and Pharmacology, the exposure

of nostrums and fake doctors, and, incidentally, the life of the physician and his relation to the people. Every minister seemed pleased and told the speaker to talk on any thing he was interested in, and told him also that he could hit at fads and cults and antimicrobial crusades as hard as he pleased. This was a golden opportunity to talk of the Federal Department of Health, and to explain its purposes. The writer confesses that he improved his opportunities in two churches, and he wonders how soon he will go to church again!

A mass meeting, which filled the "Auditorium" (one of the largest and finest buildings of its kind in the United States), was the first meeting of any size before the opening session. Dr. Gorgas explained the elimination of germ diseases from Cuba and Panama, and other speakers,—Dr. Knopf, Dr. John B. Murphy, Dr. Billings, Dr. Favill, and ex-Senator Flint,—spoke on various medical topics. When Senator Flint spoke of an attempt to make vaccination compulsory in case an epidemic occurred, and expressed regret that the legislature failed to pass the bill, a small outbreak of applause was heard, but when Dr. Murphy rebuked them and apologized for their conduct, the general applause was tremendous. Evidently the "antis" were greatly outnumbered.

At the opening session the great room was again filled to overflowing, and the inauguration of the president-elect, Dr. John B. Murphy, was very impressive, and his address was closely listened to and his sentiments loudly applauded. It was a brilliant and thoughtful address, as are all of Dr. Murphy's public utterances. Its key-note was preventive medicine, and it was re-echoed through the various sections which followed the opening meeting. In fact, one heard more of *preventive medicine* than at any previous meeting. It has been predicted that in the future this will take the place of many of the time-worn topics in the Section of Practice of Medicine and perhaps that of Surgery.

Dr. Crile was there with some new studies of degeneration in the nervous system following experimental surgical explorations.

A new Section was added, called the Hospital Section. Dr. Hornsby, the superintendent of the Michael Reese Hospital in Chicago, is responsible for this section through which he expects to standardize hospitals, to improve the scientific investigation of disease by making the

working staff more efficient, and to promote the building of hospitals with greater regard for air, light, and sanitary conditions.

The exhibit hall was full of interesting things, notably the medical cartoons that are particularly applicable to hygienic, sanitary, and experimental measures. The cartoons illustrating the views of the antivivisectionists were very suggestive. These cartoons should be widely circulated, but they cost money, and health boards that come in close contact with the people cannot afford to pay from \$15 to \$100 for a single cartoon.

The pathological display improves yearly, and the preparation of instructive specimens has reached a very high plane. The gold medal for pathological exhibits went to the Hendryx Laboratory of the Los Angeles Medical Department of the University of California.

The predominant tone of *preventive medicine* sounded above all other notes, and the great organ in the Auditorium impressed upon the throngs that filled every seat the sane constructive efforts of the American Medical Association.

THE ATTENDANCE

California seems a great distance from the East and the Middle East, as well as from many points in the Middle West, consequently the attendance was not up to the standard of the Eastern attendance. About 2,100 were registered, of whom 950 lived in California. In detail it was as follows: Alabama, 5; Arkansas, 12; Colorado, 47; Connecticut, 11; Delaware, 1; District of Columbia, 19; Florida, 3; Georgia, 4; Idaho, 4; Illinois, 164; Indiana, 62; Iowa, 55; Kansas, 37; Kentucky, 20; Louisiana, 19; Maine, 1; Maryland, 18; Massachusetts, 25; Michigan, 26; Minnesota, 45; Mississippi, 5; Missouri, 65; Montana, 9; Nebraska, 28; Nevada, 12; New Hampshire, 3; New Jersey, 18; New Mexico, 15; New York, 76; North Dakota, 4; Ohio, 60; Oklahoma, 12; Oregon, 30; Pennsylvania, 64; Rhode Island, 3; South Carolina, 3; South Dakota, 9; Tennessee, 13; Texas, 49; Utah, 26; Vermont, 2; Virginia, 8; Washington, 21; West Virginia, 10; Wisconsin, 31; Wyoming, 1; miscellaneous, 9. Out of the total number registered 1,114 lived outside of California, and this is a small representation compared with that of other years. In a way this demonstrates the advisability of holding meetings in a more central location. Wherever the Association goes it is a hardship for many who dislike to travel.

If this meeting did nothing else, it brought California and other western states into closer relationship to the Association, and in this respect it was worth the trial. Of course, many members who came from distances brought their families for an outing, knowing the cordiality of the Western coast towns. It is rather surprising that more physicians from California were not registered, as Los Angeles has about 900 doctors who live there. The adjoining states were a little backward in attendance compared with other states. Many visitors went to California with the idea of a vacation, regardless of the scientific program.

The House of Delegates was not overfull, and no bad politics prevailed.

Dr. Abraham Jacobi was elected president, which was a tribute to a great man.

THE SPECTATOR

Last Saturday I saw five boys in one cherry-tree, jubilantly active and energetic, working with a spontaneity and unity of purpose that is seldom seen in this world accompanying such intensely individual and independent action. It was a raid by permission, and the rules of warfare were, Every man for his cherry and the robins take the pits. An engagement between large cherries and small boys creates but little noise for the first fifteen minutes, but the slaughter is awful. When I returned, a half hour later, the flock had flown and were playing at hide-and-seek in the old hay-barn. A little later they were wallowing down the tall grass in the meadow, all in concert and in perfect accord. What a life a boy lives! Only one thing to do at a time, and the whole time and the whole soul to do it with! This, it seems to me, is life; and, I might say, nothing else is.

Every man with a high ambition has planned and worked toward a time when he should have a vacation in which to live, for a certain set space, just this kind of boy-life, doing one whole thing in one whole period with one whole purpose of heart. At eight years of age this life is natural and common. At twelve (the age of the boys in the cherry-tree) it is natural and common on Saturdays. At twenty-one it is possible on holidays, particularly if your best girl is present and pleasant. Later in life it is a thing to which we look forward with hope and with just enough fruition to keep us coming. How

many college students have planned to go to Europe after graduating, and, lacking funds or growing interested in things nearer home, have postponed the day of sailing till some more convenient season! Post-graduating in Europe has spurred more men to action than ever crossed the seas to post-graduate.

As we go on in this interesting world we grow interested. To become interested is to become attached. To be attached is to be tied. Before we have reached middle life we find we have become so bound up with people and things that we cannot go and come as we will. A speculator is tethered to his investments. A physician is held fast by his practice. The family man must count with his family; the merchant with his store; the farmer with his crops and cows when he goes picnicking. The man's life is no longer the simple thing it was last Saturday in the cherry-tree. There are men who, growing older, grow more tightly bound by the cords of their interests until, bound hand and foot, they are carried whither they would not. I once knew a man who felt it so necessary to make a living that he lost his life. He lost it a piece at a time, but he lost it totally just the same. He spent his evenings and his Sundays, as well as the daylight hours of the week, in his office. He made some money, but the more he made the more it made a slave of him. His wife and children had to find their best society somewhere else. He came to be regarded, not as the head of the family, but as a piece of old office furniture. He thought his family and his business would go to wrack if he left for a few days. One day he left for good. There was crape on the office-door for three days. Then they opened up, moved out his old desk, cleaned and refurnished the room, and the business went on as well as before, and the family did about as well as usual. The world also went on without a bump or joggle.

Can a busy man live while he is alive? He can. He may never see the day when he can say: I have done all the business I had planned to do, and now I retire to live. Few people ever reach that point, and fortunate it is that they do not. But many men live as they go along. The Almighty has appointed places of refreshment along the roadway where one who is so minded may stop and partake of life. One day in seven, which is one year in seven, or ten years in seventy, is given outright and freely to man for this rest, refreshment, and renewal of

life. This is given to be used for man, not for his business. He who does not use it for its intended purpose is throwing away his life. If our chosen work is in a line that may interrupt our Sunday rest, there is a way of wholesomely curbing those interruptions. Even sick and ailing people are sometimes permitted to crowd into a physician's day of rest as the camel shouldered into the Arab's tent; but many a chronic sufferer would be better for a Sunday's rest than for a physician's visit. The great Physician healed on the Sabbath day; but he did not put off any week-day cases to be cleaned up on Sabbath for lack of time through the week.

It is a good gift of God that permits a man to see that too many interests, however good, clash and neutralize one's best efforts. The physician who can refrain from dabbling in speculative things even when his clients, less capable and worthy than he, are making easy money by such speculation, is a wise man. In this self-restraint he is laying the foundations of well-earned ease, the very foundations of life. There are Saturdays in the cherry-tree in store for such a man.

Finding ourselves tangled in the complex life, with no sane way of cutting the cords that bind us, there is yet a way to live. Take Sundays, plan rests, make holidays. In these harbors of refuge, be calm deliberately. Shut out, by sheer force of will, thoughts that vex. Let the key of the shop-door lock the shop into the shop. Keep the home for the home. So shall one come to live with his wife and child. So shall he learn the good things in his neighbor's soul. So shall he have left in the world through which he has traveled so rapidly, a path that others shall know for the Way of Life.

BOOK NOTICES

MANUAL OF DISEASES OF THE EAR, NOSE AND THROAT. By John Johnson Kyle, B. S., M. D., Professor of Otology, Rhinology and Laryngology, Indiana University of Medicine. Third Edition; revised and enlarged, with 176 illustrations. P. Blakiston's Son & Co., Philadelphia, 1911. Price, \$3.00 net.

This book has become a standard among under-graduates and general practitioners. It takes up the embryology, anatomy, and physiology of the part, and then discusses the disease and treatment in a concise but clear way with-

out going into detail. The illustrations are numerous and well selected. It is a comprehensive treatise, well written and and well arranged.

GENERAL SURGERY. By Jno. B. Murphy, A. M., M. D., LL. D. Practical Medicine Series, Vol. II. 1911. The Year Book Publishing Co., Chicago.

This volume of over 500 pages, with its many illustrations, is an excellent summary and résumé of the latest advances in surgery. It covers, with a few omissions, a review of the literature of the surgical field for the whole of last year. As such, it is well up to the high standard of superiority which has marked the previous volumes.

No mention is made of the surgery of the pituitary body or of thoracic operations under positive or negative pressure of the Sauerbach cabinet.

The treatment of the newer surgery, that of the thymus gland, is interesting.

The subject of peritonitis receives a good deal of space, and is thus concluded by the editor: "There is no excuse or explanation that relieves the profession from the responsibility for the large number of deaths from peritonitis."

The reviewer was very agreeably surprised to note marked approval of that which his teacher has been teaching for many years, and in the face of adverse criticism, namely, less extensive operation for mammary cancer. The author says: "The removal of the pectorals is not at all indicated unless they are involved in the carcinomatous process."

This book will be found a valuable addition to the library of the general practitioner, as well as to that of the surgeon.

A HANDBOOK OF PRACTICAL TREATMENT. By 79 eminent specialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M. D., Assistant Professor of Medicine, University of Pennsylvania. In three volumes. Volume II, octavo, of 865 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume, cloth, \$6.00 net; half morocco, \$7.50 net.

Volume II of this series is equally satisfactory with Volume I. The whole book is given over to the consideration of specific infectious diseases, and nearly all receive full treatment, including special chapters on "Surgery and Typhoid Fever," "Surgery of the Heart," "the Sur-

gical Treatment of the Joint Complications of the Infectious Diseases," "the Ocular Complications of the Infectious Diseases," and "the Aural Complications of the Infectious Diseases."

In so large a number of subjects and authors it is difficult to single out a few as worthy of comment to the exclusion of others.

One hundred and twenty-four pages and a large number of well-executed illustrations are devoted to tuberculosis, and every possible phase of this subject is considered, including the arrangement for the care of groups, as well as of single cases. A number of the special lines of treatment, such as the use of mercury, cinnamic acid, camphorated oil, and the exclusive use of raw meat and meat-juice are given in some detail.

Thirty pages are given to syphilis, and this article includes a consideration of "606," though the authors are not particularly enthusiastic over its use.

Tropical diseases are discussed in some detail, and a number of diseases never seen in this climate are mentioned. The article on malaria is very satisfactory.

As we stated in the review of Volume I, this system answers the needs of those interested in the treatment of diseases better than any other publication of the same kind known to the writer.

REPORTS OF SOCIETIES

WABASHA COUNTY SOCIETY

The Society held its forty-third annual meeting at Plainview on July 6th, with nine members present.

Dr. E. A. French, of Plainview, presented a case of congenital heart disease. Dr. E. H. Bayley, of Lake City, read a paper on "The Births and Deaths in Lake City in the Past Fifteen Years." Dr. S. B. Haessly, of Red Wing, read a paper on "Chronic Cholecystitis, with Disease of the Pancreas" and gave case-reports. Dr. W. F. Wilson, of Lake City, presented a paper on "The Effect of Measles Upon Lichen Planus," and gave a report of a case.

Dr. Bayley reported that the committee on the establishment of a tuberculosis sanitarium had begun work and would no doubt succeed in the undertaking.

Dr. W. B. Heagerty, of Mazeppa, and Dr. H.

H. Slocumb, of Plainview, were elected members.

The following were elected officers for the current year: President, Dr. M. J. Shaughnessy, Wabasha; vice-president, Dr. W. W. Nauth, Minneiska; secretary-treasurer, Dr. E. H. Bayley, Lake City; delegate, Dr. E. H. Bayley; alternate, Dr. D. P. Dempsey; censor for three years, Dr. W. T. Adams.

The next meeting will be held at Lake City, in July, 1912.

E. H. BAYLEY, M. D., Secretary.

JOINT MEETING OF THE SOUTHERN MINNESOTA AND MINNESOTA VALLEY ASSOCIATIONS

The next annual meeting of the Southern Minnesota Medical Association will be held at Rochester, Thursday, August 3d, and the Minnesota Valley Medical Association is expected to meet with them and to furnish part of the program. At this meeting it is contemplated to effect the consolidation of the two societies, as anticipated during the past year. An attractive program is in preparation, and the entertainment committee will exert itself to make the event one memorable in the history of the Association. A special clinic at St. Mary's Hospital is talked of, and a clinic at the State Hospital is among the possibilities. A most cordial general invitation is extended to the medical profession. Come and help us make this meeting historic. The surgical clinic will begin as early as eight o'clock A. M., and the entire day will be crowded with interest.

The following is the program for this meeting:

Session at St. Mary's Hospital.

8:30-10:30 A. M. Surgical clinic in the operating-room, at St. Mary's Hospital, by Drs. E. S. Judd, E. H. Beckman, C. H. Mayo, and W. J. Mayo.

Symposium of diseases of the kidneys and ureter, in the lecture-room:

- a* Cystoscopic and Urethral Diagnosis, with Special Reference to Tuberculosis and Calculus. Dr. G. J. Thomas.
- b* X-Ray Diagnosis. Dr. Alexander Moore.
- c* Tuberculosis of the Kidney. Dr. William Plummer.

d Neoplasm of the Kidney. Dr. George Eustermann.

e Cystic Disease of the Kidney.

- 1. Exhibition of Cases,—Stomach, Duodenum, and Gall-bladder. Dr. Christopher Graham.
- 2. Diseases of the Esophagus. Dr. H. S. Plummer.
- 3. Clinical and X-ray Findings Compared in Diseases of the Chest. Dr. H. Z. Giffin.
- 4. Cervical Rib. Dr. M. S. Henderson

At Pathological Laboratory

- 1. Exhibition of Specimens. Dr. B. F. McGrath.
- 2. Gastric Ulcer. Dr. W. C. MacCarty.
- 3. Intestinal Parasites in the Northwest. Dr. Walter Sistrunk.

Luncheon at 1:30 P. M. in the Hospital Gymnasium, by Invitation of the Sisters of St. Mary's Hospital

Transfer by automobiles to the Rochester State Hospital upon invitation of Dr. Arthur F. Kilbourne, Superintendent

Afternoon Session in the Lecture-Room of the State Hospital

- 1. Invocation. Rev. E. V. Dubois, Rochester.
- 2. Business Session.
- 3. The Patient: President's Annual Address. Dr. T. L. Hatch, Owatonna.
- 4. *a* Chronic Cholecystitis with Disease of Pancreas. Paper and Case-reports. Dr. S. B. Haessly, Red Wing.
- b* Gall-bladder Diseases. Dr. R. C. Dugan, Eyota. Discussion opened by Dr. J. W. Andrews, Mankato.
- 5. Report of Cases of Acute Intestinal Obstruction due to Renal Calculus. Dr. W. T. Adams, Elgin.
- 6. Memoir of the late Dr. W. W. Mayo. Dr. Charles Hill, Pine Island.

Clinic with Demonstrations of Cases on Diseases of the Brain and Nervous System. Drs. Kilbourne, Phelps, Heyerdale, and Linton

Dinner at the State Hospital on Invitation of Dr. Arthur F. Kilbourne, Superintendent

A cordian invitation is extended to the entire profession

W. T. ADAMS, Secretary, S. M. M. A.

NEWS ITEMS

Dr. G. W. Geary has moved from Brownsdale to Carlos.

Dr. J. J. Deertz has moved from Northville, S. D., to Ashton, S. D.

Dr. Herman Linde and Miss Hilma C. Moe, of Cyrus, were married last month.

Dr. Cephas Swanson, of St. Hilaire, was married last month to Miss Mary Hoff, of the same place.

Dr. D. N. Jones, of Gaylord, has gone to Chicago to do special work in surgery and gynecology.

Dr. William Hart, of Duluth, was married last month to Miss Roberta A. Wilson, of Churchillville, N. D.

Dr. V. W. Emanuel, of Milnor, N. D., was married last month to Miss Mabel E. Hart, of Minneapolis.

Dr. Victor E. Gauthier, of Duluth, was married last month to Miss Anna E. Maguire, of Mitchell, S. D.

The physicians and the Commercial Club of Thief River Falls have begun an agitation for a hospital in that city.

Dr. H. J. Shelver, of Shakopee, has sold his practice to Dr. Cannady, of Prior Lake, and will locate elsewhere.

Dr. John F. Fargo, who formerly practiced in Minneapolis, died last month in Los Angeles at the age of 76 years.

Dr. Sattermoen, a recent graduate of the State University, has entered the firm of Drs. Pilon & Putney, of Paynesville.

Dr. John E. Hetherington, of Reynolds, N. D., was married last month to Miss Jennie W. Johnson, of Caledonia, Minn.

Dr. J. E. Copperthwaite, of Wisdom, Mont., and Miss Margaret Matthews, of Butte, Mont., were married last month.

Dr. Frank Anderson, of Dickinson, N. D., has accepted a position on the staff of the N. P. Hospital at Tacoma, Wash.

Dr. Archibald MacLaren, of St. Paul, was elected recorder of the National Surgical Association, which met at Denver last month.

Dr. Paul Green, who has been an interne for the past year at the N. P. Hospital of Missoula, Mont., has located at Livingstone, Mont.

The new McKennan hospital building at Sioux Falls, S. D., will be ready for occupancy in October. Its cost will be about \$90,000.

Dr. J. E. Miller, chief surgeon of the National Sanitarium at Hot Springs, S. D., has been made inspector-general of all the national sanitariums.

Dr. Corrigan's new hospital building at Spooner, Minn., is now ready for patients. It is practically a four-story building, and is thoroughly modern in every appointment.

Dr. T. N. Berlin, who practiced in Farmington and Minneapolis for nearly thirty years prior to 1890, died last month in Kent, Washington, at the age of 88 years.

Dr. J. G. Warren, of St. John, N. D., has decided to give up practice at that place. He will spend several months in post-graduate work in New York City, and then locate in Canada.

After a year's experience with a visiting nurse to care for and instruct those who are sick and unable to employ a nurse, the people of Winona are so well pleased as to engage the nurse for another year.

The federated medical clubs of Minnesota are preparing to give the public the benefit of a series of lectures during the coming winter. Several St. Paul and Minneapolis physicians will be on the list of speakers.

Dr. H. E. Webster, of the Duluth Department of Health, sends to the mothers of all infant children in that city a pamphlet on the care of the baby. This is an admirable work, and it cannot fail to save the lives of many babies.

Dr. W. A. Chamberlin, of Waseca, has written a book entitled "A Guide to the Prevention of Disease and to the Preservation of Health." It is written for lay readers, and has been accepted for publication by an eastern house.

In a damage suit in a St. Paul court last week, the plaintiff's attorney, in his cross-examination of a physician on the witness-stand, asked him to examine his (the attorney's) wrist and to say whether the bones had ever been broken. The physician declined to give a free examination, and the court upheld him.

Many physicians in South Dakota seem not to have learned that the State has a health laboratory where all kinds of laboratory examinations and tests are made without expense to physicians, and many more do not realize how quickly a specimen may be sent to the laboratory and returns made to the physician. The laboratory is located at Vermilion, and is under the man-

agement of Dr. Mortimer Herzberg, who is a thoroughly equipped man for the work.

Dr. Rosalie Slaughter Morton, of New York City, chairman of the Public Health Education Committee of the American Medical Association, will be in Minneapolis on August 7th and 8th, on her way home from the Los Angeles meeting. She will be the guest of Dr. Florence C. Baier, who will give her a reception on the evening of August 7th at her home, 2941 Bloomington avenue, to which all the medical women of the Twin Cities will be invited.

Governor Burke, of North Dakota, has appointed the following physicians, upon the recommendation of the State Medical Association, members of the State Board of Medical Examiners: Dr. H. G. Woutat, Grand Forks; Dr. A. G. Patterson, Lisbon; Dr. F. R. Smyth, Bismarck; Dr. A. W. Skelsey, Fargo; Dr. Francis Peake, Jamestown; Dr. Geo. M. Williamson, Grand Forks; Dr. Paul Sorkness, Fargo; Dr. A. J. McCannell, Minot; Dr. J. E. Countryman, Grafton.

Regent Hovland (Minnesota, '94) entertained the alumni of the State University of Duluth and Northern Minnesota on Saturday, July 8th, at an *alfresco* supper served on the beautiful grounds of Mr. J. U. Sebenius, which overlook Lake Superior. Mr. and Mrs. Sebenius and many of Duluth's most prominent citizens were present to greet the alumni. President Vincent and eight other Regents were also present, having been called to Duluth to select a site for the new Agricultural Experiment Station in the northern part of the State. After a most bountiful repast, a meeting was held over which Rev. John W. Powell (Minnesota, '93) presided. President Vincent and Governor Eberhart delivered stirring addresses which appealed to the patriotic spirit of the alumni. The Deans of several of the Colleges and a large number of the leading alumni were present. Drs. Schultz, Tuohy, Abbott, and Patton of Duluth, Dr. Knauff of Two Harbors, Dr. Bray of Biwabik, and many other alumni of the College of Medicine and Surgery were amongst those in attendance.

OPENING OF ELLIOT MEMORIAL HOSPITAL

Invitations will be issued very shortly by the University of Minnesota and the Faculty of the College of Medicine and Surgery for the dedication of the Elliot Memorial Hospital on September 5th. Final arrangements have not yet

been made, but the guests will assemble at the University Library. It is understood that the preliminary ceremonies will be conducted in the open air on the University Campus, to be followed by an inspection of the Hospital and its equipment.

Addresses will be delivered by the President of the University, members of the staff of the College of Medicine and Surgery, prominent physicians, alumni, and others.

The opening of the Hospital marks one of the most important events in the development of our State. Whilst its object is, primarily, to extend opportunities for medical teaching and research, with the ultimate betterment of all the people of the State, it has the immediate effect of restoring to activity and happiness those who, by reason of their sickness, are a charge upon others.

NEW APPOINTMENTS IN THE COLLEGE OF MEDICINE AND SURGERY, UNIVERSITY OF MINNESOTA

At the meeting of the Board of Regents, held June 7th, the following appointments were confirmed:

Robert B. Gibson, Ph., D., Yale, as Assistant Professor in Physiologic Chemistry. Dr. Gibson is perhaps best known through his researches in the concentration of antitoxine, which were carried out whilst he was at the Research Laboratories of the Department of Health of the City of New York. He served as Instructor, and later as Assistant Professor of Physiologic Chemistry, in the University of Missouri, from which latter position he resigned to come to Minnesota. His researches have covered a broad field, including those "On the Fractionation of Agglutinins and Antitoxins," and studies in the various fields of metabolism and immunity, as also pharmacologic researches.

Addison Gulick, B. A., Oberlin; M. A., Harvard; Ph. D., Wurzburg, as Instructor in Physiologic Chemistry. During the past year Dr. Gulick has held a research and teaching fellowship in biochemistry under Professor MacCullum in Toronto University. His researches embrace the microchemistry of iron in tissue cells, the individuality of chromosomes of higher vertebrates, and other problems in biology.

Richard Everingham Scammon, A. B., Kansas; Ph. D., Harvard, as Assistant Professor in Anatomy. Dr. Scammon was Austin teaching fellow in histology and embryology at Harvard Medical School, and has served as In-

structor and as Assistant Professor of Anatomy in the University of Kansas. He has published valuable contributions to embryology and anatomy.

William Fitch Allen, A. B., A. M., Stanford, as Instructor in Histology and Embryology. Dr. Allen has served in the embryological laboratory of the University of California, and as instructor in the University of Illinois, and assistant to the United States Fish Commission. His researches have consisted of valuable contributions to embryology and anatomy.

William Atwood Hilton, B. S. and Ph. D., Cornell, as Instructor in Histology and Embryology. Dr. Hilton resigned an instructorship at Cornell to accept the position at Minnesota. He has published most valuable contributions on histological, embryological, neurological, and anatomical subjects.

Dr. Charles A. Reed, Minneapolis, was appointed Clinical Instructor in Orthopedic Surgery.

Dr. F. W. Schlutz, Minneapolis, was appointed Clinical Instructor in Pediatrics.

Dr. E. Mendelssohn Jones, St. Paul, was appointed Clinical Assistant in Surgery.

R. G. Davidson was appointed Steward to the Elliot Hospital. He served as Assistant Steward at the State Hospital for the Insane at Jamestown, N. D.

NORTHWESTERN PHYSICIANS AT THE A. M. A. MEETING

The following physicians registered at the Los Angeles meeting of the A. M. A. last month: From Minnesota.—H. B. Aitkens, Le Sueur Center; J. W. Andrews, Mankato; Arthur E. Benjamin, Minneapolis; W. F. Braasch, Rochester; H. M. Bracken, Minneapolis; F. W. Bullen, Hibbing; J. W. Chamberlin, St. Paul; C. R. Christenson, Starbuck; William J. Cochran, Lake City; Homer Collins, Duluth; H. C. Cooney, Princeton; F. L. Durgin, Winnebago; C. E. Fawcett, Stewartville; H. W. Gammell, Madison; L. L. Gibbon, Lowry; Chas. Lyman Greene, St. Paul; F. N. Hunt, Blue Earth; Wm. Alexander Jones, Minneapolis; E. S. Judd, Rochester; Herman Linde, Cyrus; Archibald MacLaren, St. Paul; J. W. Draper Maury, Rochester; C. H. Mayo, Rochester; C. F. McComb, Duluth; Thos. McDavitt, St. Paul; John W. Mintener, Minneapolis; Anton J. Moe, Huron Lake; James E. Moore, Minneapolis; Clarence R. Morss, Coleraine; William R. Murray, Minneapolis; J. R. Peterson, Willmar; H. S. Plum-

mer, Rochester; Fred J. Pratt, Minneapolis; Auten Pine, St. Paul; Catherine E. Putnam, St. Paul; Francis M. Rose, Faribault; Jacob C. Rothenburg, Springfield; G. J. Schottler, Dexter; J. P. Sedgwick, Minneapolis; Nellie S. Shulean, Cambridge; Alfred E. Spalding, Lucerne; M. Sullivan, Adrian; David Owen Thomas, Minneapolis; Louis B. Wilson, Rochester; E. W. Wooley, Winona. From North Dakota,—Wm. H. Bodenstab, Bismarck; Andrew J. Kaess, Fargo; E. P. Quain, Bismarck; V. H. Stickney, Dickinson. From South Dakota,—Alfred G. Allen, Deadwood; Albert E. Brown, Conde; E. Jay Clemons, Aberdeen; J. W. Freeman, Lead; A. L. Peterman, Parker; P. H. A. Pinard, Jefferson; Omar W. Pinkston, M. C., U. S. A., Ft. Meade; Denton W. Rudgers, Yankton; T. B. Smiley, Mt. Vernon. From Montana,—Donald Campbell, Butte; John A. Donovan, Butte; H. D. Kistler, Butte; E. F. Maginn, Butte; G. T. McCullough, Missoula; Hugh J. McDonald, Butte; T. J. Murray, Butte; John M. Scanlan, Warm Springs; Thos. D. Tuttle, Helena.

PRACTICE FOR SALE

In North Dakota. A \$4,000 practice to the purchaser of my office furniture for \$300.

PHYSICIAN WANTED

A competent physician is wanted to locate at Gaylord, Minn. For full particulars inquire of or write Dr. D. N. Jones, Gaylord, Minn.

PRACTICE FOR SALE

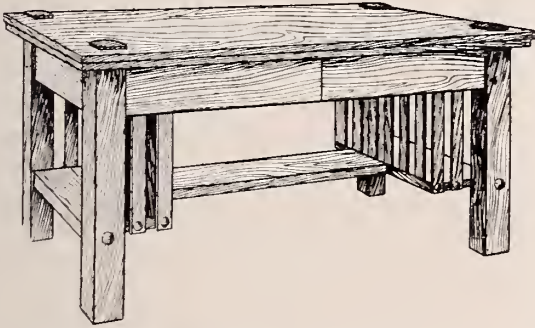
I will sell my practice, paying in cash between \$2,500 to \$3,000 a year, and office furniture for a reasonable cash price, if taken at once. Good location in an inland town of 300 population with large surrounding territory, 40 miles from Minneapolis. Rich German and Scandinavian community; only physician. The electric short line will reach here by fall. Address S. W., care of this office.

PRACTICE FOR SALE

Having decided to move to Minneapolis, I offer for sale my practice of \$3,000 to \$4,000 per year in Red Wing, which is the best of the smaller cities of Minnesota, in the banner county of the state; an excellent class of people; fine schools, colleges, and churches, and good hospital advantages. Will sell part of fine office equipment at less than its value to a good man whom I can recommend and introduce, and who will buy my residence at a fair valuation. A little money will handle it all, time being given on balance. Might sell without residence if desired. This will bear investigation. If interested, give prompt attention. F. W. Dimmitt, M. D., Red Wing, Minn.

Your Credit Is Good at The New England!

Forty-Ninth Semi-Annual Half Price Sale Manufacturers' Fine Furniture Samples.



A GAIN has the standing of Minneapolis as one of the great retail centers of the country been evidenced, and the value of a big outlet and resultant purchasing power of an individual concern been emphasized by the response to the announcement of our Forty-Ninth Semi-Annual Half Price Sale Manufacturers' Fine Furniture Samples.

DURING the next few weeks, cars aggregating an entire trainload, and a generous one, too, will have arrived from Grand Rapids, Chicago, Kenosha, Wis., Indianapolis, Holland, Mich., Charlotte, Mich., Detroit, Grand Ledge, Mich., and other large furniture manufacturing centers, to say nothing of the Samples procured from our local furniture manufacturers.

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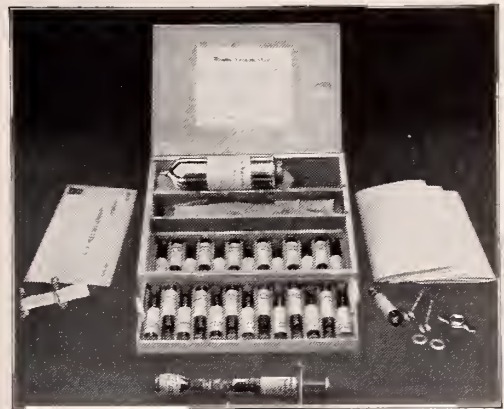
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PUBLISHER'S DEPARTMENT

THE TREATMENT OF HYDROPHOBIA BY RABIES VACCINE

Until recently, it has been necessary to send patients exposed to hydrophobia, to a Pasteur Institute (in many instances located in a far-distant city) for prophylactic treatment. The Hygienic Laboratory of the United States Marine Hospital Service devised a method of administering rabies vaccine, whereby it could be prepared at a central laboratory according to Pasteur's method, and distributed to any part of the United States, allowing the patient to be treated by his attending physician.

Briefly, the following is Pasteur's method for preparing rabies vaccine: The spinal cord of a rabbit, dead of rabies as the result of an injection of a "fixed virus," (rabies vaccine known to kill within a fixed time), is removed under aseptic conditions. A cord containing the rabies virus is suspended over a layer of potassium hydroxide and kept at a temperature of 22° C. from one to eight days. The virus is gradually weakened or atten-



uated as the cord is dried, the strength being decreased in direct proportion to the extent of the drying.

In the preparation of each injection, a portion of a cord in which the virus has been properly attenuated by drying the requisite number of days, is taken and emulsified by grinding under aseptic conditions with a weak solution of glycerin. The emulsion of rabies virus thus prepared constitutes the first dose.

The second dose is prepared in the same manner from a portion of the cord which has not been attenuated to the same degree, and each subsequent dose is prepared in like manner from cords containing virus of increasing potency.

The technic of the administration is quite as simple and safe as the ordinary hypodermatic injection.

H. K. Mulford Company have built and equipped special laboratories at Glenolden, Pa., and, under the personal direction of expert bacteriologists,

are preparing Rabies Vaccine after the method of Pasteur.

The preventive treatment of rabies, as formulated by the H. K. Mulford Company, consists of 25 injections of Rabies Vaccine, the strength of each injection varying in accordance with the plan of treatment adopted by the Hygienic Laboratory of the United States Marine Hospital Service.

Cords with virus of various strengths are kept in constant readiness for preparation of Rabies Vaccine to meet all emergencies.

The vaccine is furnished in ampuls, and all the physician is required to do in making the injection is to mix the vaccine in the ampul through a special needle, furnished with each syringe, with the physiologic salt solution contained in each syringe, then inject the patient. The technic is as simple as an ordinary hypodermatic injection.

Special Caloris Vacuum Bottles are used in the shipment of each day's supply of vaccine, insuring its receipt in a satisfactory condition.

Preventive treatment by Rabies Vaccine should be started as soon after exposure as possible. After symptoms have fully developed there is no hope for relief, as a cure for hydrophobia has not been discovered. The period from the exposure to the development of the symptoms of hydrophobia is known as the period of incubation. This varies from eight days to six months under natural conditions, although occasionally cases are reported where the incubation period is much longer.

Immediately following exposure, every precaution should be employed until it is proven that the suspected animal did or did not have rabies. Aside from cauterizing and otherwise treating the wounds, arrangements should be made at once for the use of Rabies Vaccine in the form of preventive treatment prepared after the method of Pasteur.

If proper precautions are taken and the patient immediately given the Pasteur treatment, the fatality from this terrible disease may be virtually reduced to a minimum.

According to statistics rabies is more common in the summer months, therefore at this season of the year, with danger of mad dogs running amuck, the method of supplying Rabies Vaccine so that the physician may administer it to his own patients, is of particular interest to our readers.

Full and complete literature on Rabies Vaccine will be mailed by H. K. Mulford Company of Philadelphia, upon request.

AGAIN THE HAY-FEVER PROBLEM

Whatever else happens, or fails to happen, here is something that always bobs up at the appointed time. Taxes are not more certain and insistent. Sooner or later every physician has this problem to solve. The trouble is, it doesn't stay solved. The long-looked-for hay-fever specific has not yet arrived.

Undoubtedly the most successful way to treat hay fever is to send the patient where he will not be exposed to the particular pollen to which he may be susceptible—to prescribe a sea-voyage, for instance, or a change of climate. In this manner temporary immunity, at least, is obtainable. Unfortunately, very few patients, comparatively, have at their disposal the necessary time and means for travel. In nineteen cases out of twenty the physician must fight the intractable disease with such weapons as pharmacology and pharmacy have placed in his hands.

Of the remedial agents in the possession of the medical profession the supraenal substance has proved itself by far the most efficient. While not attaining to the dignity of a specific, it is at least a satisfactory palliative. It successfully antagonizes the symptoms of the disorder and gives the patient a temporary comfort that is not to be despised. It is probably best used in the forms of Adrenalin Chloride Solution, Adrenalin Inhalant, and Anesthine Cream.

The two preparations first named—the former diluted with four to five times its volume of physiological salt solution, the latter with three or four times its volume of olive oil—are sprayed into the nares and pharynx. Any good atomizer that is adapted to oily or aqueous liquids (preferably, however, one that throws a fine spray) may be used. As to the comparative value of the preparations for the purpose named, it may be said that the Solution "takes hold" more promptly, while the astringent effect of the Inhalant is more lasting.

Anesthine Cream is a much newer product, having been introduced to the profession, if we mistake not, in the early months of 1910. Nevertheless it made a great record for itself during the hay-fever season of last year. Few medicinal preparations, indeed, make their debut so auspiciously. The formula came from a prominent practitioner of The Hague, Holland, and combines Adrenalin Chloride and Para-amido-ethyl-benzoate in a bland oil base. Right here some reader may inquire: "What is Para-amido-ethyl-benzoate?" Ask Parke, Davis & Co. They have printed matter which answers this very question. Write for it. Write the company, too, for its literature on hay fever, addressing your request to the home offices in Detroit, Mich., and mentioning this journal. You will get some useful and interesting information.



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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, AUGUST 1, 1911

No. 15

OPERATIVE TREATMENT OF PERFORATION IN TYPHOID FEVER*

ANALYSIS OF ONE HUNDRED AND THIRTY-THREE CASES WITH A REPORT BY
THE WRITER OF THREE ADDITIONAL CASES

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MINNEAPOLIS

The most serious of all the complications of typhoid fever is perforation. It occurs in about 2.7 per cent. of all of the cases and in from 9 per cent. to 12 per cent. of all the fatal cases of the disease. The mortality in the unoperated cases, as given by Murchison, is from 90 per cent. to 95 per cent., so that we may consider that recovery from this complication is very rare. Its recognition by the clinician is sometimes easy, as in Cases 1 and 3, which I will report, and is more often beclouded by an element of doubt, as in Case 2, while in rare instances the diagnosis is impossible. Such a case recently occurred in the medical service of my chief, Dr. Charles Lyman Greene, at the University Hospital, where the diagnosis of perforation was made only at autopsy, the patient having manifested no distinctive symptoms of perforation during life.

Inasmuch as the life of the patient is usually at stake, and the mortality is in direct ratio to the promptness with which the diagnosis is made and operative relief applied, the practitioner must make up his mind quickly and act at once, without waiting for time to develop more distinctive symptoms. It requires courage and confidence in one's diagnostic resources to do this. The patient is battling with a most serious in-

fection; he is weak and emaciated; his mind often beclouded, and his sense of perception dull. He often can give no accurate description of his symptoms, nor can he well locate his pain. It is a situation that will try the most experienced and skilled practitioner. Many lives have, doubtless, been sacrificed and operation delayed because of indecision and the fear of subjecting a patient, already very sick, to a needless operation that will further endanger his life.

It is not my purpose to detail the symptoms of perforation in typhoid fever, but to present a study of the cases which, up to this time, have been treated by operation, and to give a report of three cases of my own. Before proceeding to this study I wish to discuss, briefly, the symptoms which will be helpful in making the diagnosis.

One's attention is first attracted by pain in the abdomen, of which the patient complains. This symptom should never be overlooked in typhoid fever. Nurses should be instructed to notify the attending physician at once when such a complaint is made by the patient, no matter how mild the pain may be. At each visit of the physician, the patient should be questioned relative to pain in the abdomen, and the abdominal wall should always be palpated for points of tenderness. The distention of the abdomen should always be noted, the liver dullness out-

*Read at the 42d annual meeting of the Minnesota State Medical Association, Minneapolis, Oct. 5 and 6, 1910.

lined, the respiratory abdominal movements observed, and all those points which may later be of aid in determining whether or not perforation exists, should be observed, and a bedside note made upon the chart. Every few days during the course of the disease a leucocyte count should be carefully made and recorded, so that, should symptoms of perforation arise, a leucocyte count made a few days prior to the onset of the symptoms will be at hand for purposes of comparison.

Upon notification that his patient is having abdominal pain, the physician should go immediately to him and examine him most thoroughly. The first question that will arise is, Is the pain due to the distention of the bowel with gas? Sudden severe abdominal pain in typhoid fever is rarely due to this condition. Some patients, from the onset of the typhoid fever, have much distress from the distention of the bowel with gas; others complain of distress from gas from time to time during the course of the disease, but such pain is usually not severe and the passage of a high rectal tube, a Noble's enema, or hot turpentine stupes on the abdomen will relieve it. The pain of perforation is usually severe. It may, however, be a dull ache, or the patient may speak of it only when questioned. Its onset is usually abrupt. It is localized at first, as a rule, in the right lower abdomen. It may be paroxysmal in character. It is not relieved by the expulsion of gas, is usually associated with tenderness in the lower abdomen, and accompanied by leucocytosis. The pain of gas-distention, on the other hand, is rarely severe, usually paroxysmal, is relieved by the expulsion of gas, is general over the whole abdomen, rarely causes changes in temperature-range or pulse-rate, does not affect the liver-dullness nor the abdominal respiratory movements, is not accompanied by a fixed point of tenderness, and does not cause leucocytosis. The differentiation, therefore, between abdominal distress from gas-distention and perforation is made, not by the consideration of any one single symptom, but by the analysis of all the symptoms distinctive for each condition. It is rare, indeed, for one to be in doubt between these two conditions after a careful study of his case and a weighing of the evidence.

Another question will here arise: Is the abdominal pain due to a complicating appendicitis? Such a question arose in one of our cases, and such was the diagnosis of the consulting surgeon. Appendicitis as a complication in typhoid is rare. The writer has seen a number of cases of typhoid

begin like appendicitis, and for a number of days he has been in doubt between these two diseases, but an appendicitis or typhoid ulcers in the appendix, causing sudden abdominal pain, simulating perforation, in the course of typhoid fever, must be very unusual. Cholecystitis is not an infrequent complication of typhoid fever, causing abdominal pain, but the pain is of a dull, aching character, is localized in the right upper quadrant of the abdomen, over the gall-bladder, and is associated with tenderness in that region. The other causes of acute abdominal pain, such as renal calculus, acute pancreatitis, acute intestinal obstruction, intussusception, acute abdominal pain from uremia, or a reflected abdominal pain from a complicating pneumonia, must be considered, but are usually easily excluded by a careful analysis of the symptoms distinctive for these diseases.

Little help is to be received by the clinician from a study of the temperature-chart, since some of the cases show prompt drops in temperature and others show a rise in temperature, while in some cases no change occurs in temperature. The pulse-rate is usually accelerated, and this symptom is of some value. Its volume is often modified, and one gets the thready pulse of severe peritonitis, but there are so many conditions that may cause an increased pulse-rate and even a change in the volume that one does not receive much valuable help from its observation.

The objective symptoms which have been of most assistance to the writer in making the diagnosis have been the obliteration of liver-dullness, the localized tenderness in the lower abdomen, usually in the right quadrant, fixed in position; the obliteration of the abdominal respiratory movements, the presence of movable dullness in the flanks, and, last but not least, a well-marked leucocytosis. Case 2 did not show the obliteration of the liver-dullness as an early symptom, neither were the abdominal respiratory movements obliterated, neither was there any marked leucocytosis in this case, but, as will be noted, the leucocyte count rose from 6,000 prior to perforation to 7,600 subsequent to perforation. A positive increase in the leucocyte count, such as was present in Cases 1 and 3, was, however, of very great assistance in coming to a prompt conclusion. In Case 1, prior to perforation, the leucocyte count was 8,700; immediately following perforation it was 15,000. In Case 3, prior to perforation the leucocyte count was 9,600;

subsequent to perforation it was 17,000. One finds therefore, in the consideration of the diagnosis of perforation, that he must rely, not upon any one single distinctive symptom or objective sign, but, rather, upon a general consideration of all the features of the case. The more carefully and in detail the case-symptoms are studied the more likely is he not to err in his conclusion.

The suggestion that laparotomy be resorted to for perforation of the bowel in typhoid we owe to Leyden, in a paper published in 1884 (*Deutsche Med. Wochen.*, 1884, XVII). In the same year Mikulicz (*Volkmanns Samml. Klin. Vortr.*, No. 262) reported a successful case of laparotomy and intestinal suture done for intestinal perforation due, as he claimed, to typhoid fever. The first operation for perforation in a case of undoubted typhoid fever was performed by Lücke (*Deutsche Zeitschr. f. Chir.*, 1887, XXV, II) in 1887. The perforation took place on the eighth day, and the operation was done twelve hours later. The operation lasted two hours, and the patient died a few hours later.

Furbringer (*Berliner Klin. Woch.*, 1889, XXVI, 667) alludes to the first successful operation on record for perforation in typhoid fever. The operation was done by Wagner on a woman convalescing from typhoid fever. The abdominal cavity was irrigated, and the wound sutured without drainage. The patient recovered.

In 1891 Fitz (*Trans. of Assoc. of American Physicians*, Vol. VI, p. 200) was able to collect ten cases in which laparotomy had been performed for intestinal perforation in typhoid fever, with only one recovery, a mortality of 90 per cent. Fitz, in discussing the subject, says: "The inference is direct that this operation offers but slight hope in the early stages of typhoid perforation of the intestine." The lack of success is best attributed to the condition of the patient at the time, enfeebled, as he usually is, between the second and fourth weeks of the disease, when perforation is most likely to take place. At the conclusion of his paper, Fitz further says: "Immediate laparotomy for the relief of the suspected intestinal perforation in typhoid ulcer is to be advised only in the milder cases of the disease. In all others the evidence of a circumscribed peritonitis is to be awaited and may be expected in the course of a few days. Surgical relief to this condition should then be urged as soon as the strength of the patient will warrant."

Seven years after Fitz's paper, Keen published his monograph upon the surgical complications

of typhoid fever. In this admirable surgical study, 83 well-authenticated cases of perforation in typhoid treated by surgical measures, were collected. Of these 80.64 per cent. died, as compared with 90 per cent. of Fitz's cases. As Keen says, "When this is contrasted with Murchison's unchallenged figures of 90 per cent. to 95 per cent. of deaths after perforation, without operation, we may well take courage for the future." Keen concluded that operations are more fatal between 15 and 25 years of age than under 15 or over 25. He further states: "The best time for operation is not during the immediate primary shock, which lasts during the first few hours. The second twelve hours after perforation has been the most favorable up to this time." "If the operation is not done within about twenty-four hours after the perforation, there is practically no hope of recovery." Of Keen's 35 cases operated on twenty-four hours after the onset of symptoms indicating perforation, 28 per cent. recovered, while of the 25 operated on later than twenty-four hours only 12 per cent. recovered. Keen further says: "When physicians are not only on the alert to observe the symptoms of perforation, but when the knowledge that perforation of the bowel can be remedied by surgical means, has permeated the profession so that the instant that perforation takes place the surgeon will be called upon and, if the case be suitable, will operate, we shall find, unquestionably, a much higher percentage of cures than have thus far been reported."

In 1899, Platt (*London Lancet*, Feb. 25, 1899) collected 20 cases in addition to those collected by Keen, making a total of 103 cases reported up to and including the year 1899, with recovery in 20.3 per cent. and death in 79.7 per cent.

No further important studies upon the subject appeared until that of Harte and Ashurst (*Annals of Surgery*, Vol. 39, p. 8, 1904). In this study all the published cases up to and including the year 1903 were collected. The total number of cases analyzed was 362, of which 74.3 per cent. died and 25.7 per cent. recovered. When we compare this with Platt's recovery percentage of 20.3, made in 1899, and Keen's 19.36 per cent., made in 1898, and Fitz's 10 per cent., made in 1891, we have great reason to rejoice over the decreasing mortality in this most fatal of the complications of typhoid fever. Harte and Ashurst found that the mortality was less under 15 years of age than over 15; that it was greater in males than in females (75.7—63.3); that it

was lower in cases operated on within the first twelve hours after the perforation than in the second or third twelve hours; that if the perforation took place and operation was done in the first week during a relapse or in convalescence the mortality was lower than in any other period of the disease. These authors advised free irrigation of the abdominal cavity and drainage following suture of the perforation.

Since the paper of Harte and Ashurst appeared, I have not been able to find any further collection of recorded cases and have, therefore, collected the cases reported since 1903, adding three cases of my own. The collection of the recorded cases is as complete as the facilities of our reference library will permit. It does not, however, include all the reported cases. In a search through the literature since 1903 I have been able to collect 133 reported cases of typhoid fever in which perforation occurred and was closed by suture. Of this number 68.5 per cent. died and 31.5 per cent. recovered. When we compare the percentage of recoveries with the figures of Harte and Ashurst's 25.97 per cent., made in 1904, and Platt's 20.3 per cent., made in 1899, and Keen's 19.36 per cent., made in 1898, and Fitz's 10 per cent., made in 1891, we cannot help but conclude that real progress is being made in dealing with this heretofore fatal complication of typhoid fever. Combining my own 133 cases with the 362 collected by Harte and Ashurst we have a grand total of 495 cases of which 27.4 per cent. recovered and 72.53 per cent. died. These figures probably express fairly accurately the results of the surgical treatment of perforation in typhoid at the present time.

In attempting to find a reason for the lower mortality in my series over those of Harte and Ashurst, I noted, first, that 15 per cent. in my series were 15 years or under as against 9.3 per cent. of their series, and, second, that 50.4 per cent. of my series were operated on within twelve hours of the onset of symptoms as against 47 per cent. of their cases. Analyzed according to age, my statistics bear out the observations of Keen and Harte and Ashurst that the mortality is lowest up to 15 years of age and beyond 25 years, and highest from 15 to 25 years. Studying mortality-records of the combined statistics of Harte and Ashurst and my own with reference to the time in the disease when the perforation took place, I find the lowest mortality, 50 per cent., in the cases where the perforation took place in the first week, the second lowest

when the perforation took place during a relapse, and the highest mortality in the third and fifth weeks. Of the 16 cases in my series operated on within three hours of the onset of the perforative symptoms, 50 per cent. recovered; of the 25 cases operated on between three and six hours, 44 per cent. recovered; of those operated on between twelve and twenty-four hours, 20 per cent. recovered; and of those operated on between twenty-four and forty-eight hours 11.1 per cent. recovered. We are therefore justified in concluding that Keen's conclusion was incorrect when he said that the best time for operation is not during the immediate primary shock which lasts during the first few hours. These recorded cases clearly prove that the time to operate in perforation in typhoid fever is just as soon as the diagnosis can be made. Every hour that the operation is delayed following perforation lessens the patient's chances of recovery. If the patient is in his own home and removal to the hospital will occasion delay, operate in his home. Do not permit any obstacle to delay the opening of the abdomen and the closing of the opening from which is pouring an infected intestinal contents into the abdominal cavity.

CASE 1.—Dr. C., 29 years of age, male, physician, unmarried. Good family history. Had appendicitis two years ago with fecal fistula; recovered from without incident. Always a well man until the present illness. Saw patient first October 6, 1906. Was complaining of headache and fever. Had gone hunting on October 1st and came home feeling ill. Since then had had some nosebleed, fever, and poor appetite. Examination at that time showed none of the distinctive symptoms of typhoid, except a continuous temperature and headache. The patient, however, was admitted to the Northwestern Hospital October 7th, and was put to bed and gradually developed all the typical symptoms of typhoid, —rose-spots, tympanites, positive Widal reaction, and a leucocyte count of 8,700. The course of the typhoid was typical in all respects from October 7th, the date of the admission, to October 15th, 9:00 P. M., when the patient was awakened out of sleep with a pain in the abdomen, coming on in paroxysms, which he thought was due to gas in the bowels. He was not seen at that time, but an enema was ordered which relieved him for a short time. At midnight the nurse again reported that the abdominal pain had recurred, and there had been a sharp rise in temperature to 103°. (See chart.) Pulse had increased in frequency. Saw patient at 5:00 A. M. He was in constant pain of severe type. Pain was complained of over the whole abdomen; pulse, 95, thready in character, but regular; temperature, 101°; abdomen, rigid; general tenderness, marked, more pronounced over right lower quadrant; no vomiting; respiratory abdominal movements restricted but not obliterated; no tympanites; abdomen, scaphoid. Moving the patient from one position to another caused him to cry out with pain. He complained of considerable pain

on urination. Leucocyte count, 15,000. Liver-dullness partly obliterated. The onset of pain, the marked tenderness, partial obliteration of respiratory movements, and liver-dullness, increase in pulse-rate, and marked leucocytosis made the diagnosis of perforation of typhoid ulcer with peritonitis certain.

Dr. Arthur T. Mann was called in consultation. He concurred in the diagnosis, and the abdomen was immediately opened, ten hours after the onset of symptoms, by Drs. Mann and Moore. A perforation the size of a pin-head, at the base of a typhoid ulcer, was found in the ileum, from which intestinal contents were pouring into the abdominal cavity. There was much semi-purulent, milky fluid in the pelvis, many flakes of fibrin over the intestinal coils near the perforation. There was no general peritonitis. The perforation was closed by Lembert's suture, the purulent fluid in the pelvis mopped out with gauze, and the abdomen closed without drainage. The patient stood the operation well, and all abdominal pain subsided in twelve hours. Recovery was uneventful.

CASE 2.—Miss S., 30 years of age, single, servant girl. Received into Asbury Hospital May 2, 1907. Patient had been well until ten days ago, when she was taken with headache, fever, and cough. On admission to the hospital the patient presented all the typical symptoms of typhoid,—rose-spots, diarrhea, enlarged spleen, positive Widal reaction, and a leucocyte count of 6,000. Soon after entering the hospital, her temperature began to recede, and by May 12th convalescence was apparently established; but on May 13th the temperature again started to rise, and the patient developed all the symptoms of a relapse. The rose-spots reappeared, also diarrhea, and the temperature gradually increased. The patient, however, was comfortable, and, except a rather free diarrhea, nothing unusual was noted until the tenth day of the relapse when, about 8:00 p. m., she began complaining of some pain in the right lower abdomen. I saw her at 11:00 a. m. that day. Pain was not severe. She was sleeping at the time I visited her, and did not complain of pain unless asked about it. No drawn expression of the face; pulse, a trifle increased; abdominal respiratory movements well seen; no obliteration of liver-dullness; no dullness in flanks; tympanites not marked; no vomiting. Palpation of the abdomen showed moderate tenderness of right side of abdomen from costal margin to crest of ileum, and slight rigidity, which was not pronounced. Left side of abdomen, not tender; no irritation of bladder. Ordered turpentine stupes; also soap and water enema. Food was withheld, and leucocyte count ordered. Saw patient again the evening of May 23d. Bowels had moved twice; no vomiting; leucocyte count, 7,600. Physical examination showed a trifle more rigidity in abdomen on right side; liver-dullness normal; pulse a trifle more accelerated, 100 to the minute; no change in temperature-range. Patient was perfectly rational and complained of the pain only when asked about it. Was not willing to make a diagnosis of perforation on account of the lack of distinctive signs. Saw patient on the morning of May 24th. Had a fair night; slept fairly well. No sharp paroxysms of pain. When awake had complained of pain in right abdomen. Physical examination showed no marked tympanites; liver-dullness normal; abdominal respiratory movements well seen, especially in upper part of abdomen. When

patient was turned from side to side she complained of pain. Vomited once during the night. When I talked with her she said nothing about abdominal pain except when her attention was called to it. Leucocyte count, 7,500. Palpation of abdomen revealed well-marked tenderness over right lower quadrant, more marked over McBurney's point. Muscles rigid when palpation was attempted. Percussion in left flank showed a slight movable tenderness. Liver-dullness slightly diminished, reaching to within a finger's breadth of the costal margin. The persistence of pain in the right lower quadrant of the abdomen in a patient heretofore free from abdominal pain, the diminished area of liver-dullness, the signs of free fluid in the abdominal cavity, the increased rapidity of the pulse (see chart) pointed almost directly to a slow perforation at the base of a typhoid ulcer. Dr. F. R. Woodard, staff surgeon, saw the case in consultation, and concurred in the diagnosis of perforation, but thought that the perforation was probably in the appendix. The abdomen was opened at 8:30 p. m., twenty-four hours after the onset of abdominal symptoms. Operation revealed a small perforation, half a pin-head in size, in the ileum in one of the coils lying in the pelvis, from which intestinal contents were pouring into the peritoneal cavity. There was no general peritonitis, but a rather marked pelvic peritonitis, considerable fibrinous lymph covering the coils of the ileum in the pelvis. There was much purulent exudate, milky in character, in the pelvis, which was mopped out. The perforation was closed with Lembert's suture. The peritoneal cavity was not irrigated.

May 25th, a. m. The patient got through the night fairly well. Pulse, 130; temperature, 101.2°. Patient rational, calling for water and discussing her condition. Complains of little pain in abdomen.

During May 26th the patient did fairly well, but in the afternoon of May 27th began vomiting, went into collapse with dilated pupils, wandering mind, and died on the evening of that day, fifty-six hours after operation. In connection with this case there are two points of interest: (1) the slow developing onset without the well-recognized distinctive symptoms of perforation; and (2) the absence of marked leucocytosis.

CASE 3.—American, 47 years, single. Good family history except that one brother died of cancer at 50 years of age and another at 54 years, cause unknown. Drinks and smokes moderately. Denies venereal disease. The patient was well and at work on a railroad gang until November 4, 1907, when he stopped work and came to Minneapolis. Says that many of the gang in which he worked suffered with diarrhea, and he had it also. After coming to the city he drank beer all day, and on November 5th awoke feeling badly. He could not eat and had a headache and felt chilly. From November 5th to November 19th he was sick, but only in bed part of the time. He entered the hospital November 19th with a temperature of 103°, pulse 110, and the usual signs of typhoid, except the presence of rose-spots. His blood gave a positive Widal; his leucocyte count was 9,600. The diagnosis of typhoid fever was made, the patient put on liquid diet, cold sponges were given when the temperature exceeded 102.5°, and the bowels moved every other day by enema. Despite the fact that his temperature did not range high nor his pulse become rapid, the patient seemed profoundly infected. He complained much of headache, slept rather

poorly, and was bothered with profuse sweats. He, however, did fairly well until 3:00 p. m., December 5th, about thirty days after the onset of symptoms, when he suddenly vomited. His temperature dropped to 99°, but his pulse remained the same. I had seen and examined him the morning of December 5th, but noted nothing unusual except that the abdomen was somewhat more tympanitic. At 4:00 p. m. he complained of severe pain in the abdomen. His temperature had dropped to 97.4°, pulse-rate was 108 and Dr. Johnson, the interne, noticed that the patient was tender over the right abdomen and that his face wore an anxious expression. At 5:00 p. m. he again vomited. At 5:30 he had a shaking chill, his temperature was 98.8°, and he was complaining of pain in the abdomen. I saw him at 6:30 p. m. He presented the appearance of profound shock,—face pale and drawn, marked tremor, profuse sweating, rapid pulse (150), and partial obliteration of liver-dullness. He did not suffer from much abdominal pain, but was markedly tender over the right lower quadrant of the abdomen. Leucocyte count was 17,000. I diagnosed acute perforation, and the patient was taken to the

operating-room and operated on by Dr. G. G. Eitel at 8:00 p. m., five hours after the onset of symptoms. A pin-head sized perforation in the ileum close to the ileocecal valve was found. The pelvis was filled with a milky fluid. There was no general peritonitis. Unfortunately, the bowel-wall gave way through the floor of the ulcer while being held by the assistant, preparatory to suture, and it was necessary to resect the bowel. This procedure added much to the shock of the operation, and although the patient got off the table, he never rallied, but died at midnight, three hours after the operation was done.

From a study of these cases and those reported by others, we are justified in drawing the following conclusions:

1. Perforation in typhoid fever demands, in every case, surgical interference. This should now be established as a golden rule of surgery.

2. Such surgical interference should be given the moment the diagnosis of perforation is made.

AUTHORS' STATISTICS.

Cases	Deaths	Re-covers	Deaths	% Re-covers
133	91	42	68.5	31.5

ANALYSIS ACCORDING TO AGE.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
Up to 15 yrs.	20	10	10	50.	50.
15 to 25 "	41	27	14	65.9	34.1
From 25 yrs. up..	34	21	13	61.8	38.2

ANALYSIS ACCORDING TO STAGE OF DISEASE.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
1st week.	2	2	0	100	0.
2d "	19	12	7	63.2	36.8
3d "	31	22	9	70.97	29.03
4th "	23	13	10	56.1	43.9
5th "	7	5	2	71.5	28.5
7th "	2	1	1	50.	50.
1st " relapse	4	3	1	75.	25.
2d "	5	3	2	66.6	33.4

ANALYSIS ACCORDING TO TIME BETWEEN PERFORATION AND OPERATION.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
1- 3 hours.	16	8	8	50.	50.
3- 6 "	25	14	11	56.	44.
6-12 "	22	13	9	59.1	40.9
12-24 "	25	20	5	80.	20.
24-48 "	27	24	3	88.9	11.1
After 48 "	4	2	2	50.	50.

COMBINED STATISTICS OF HARTE AND ASHURST AND AUTHOR.

Total Cases	Deaths	Re-covers	Deaths	% Re-covers
495	359	136	72.53	27.47

ANALYSIS ACCORDING TO AGE.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
Up to 15 yrs.	54	28	26	51.8	48.2
15 to 25 "	192	147	45	76.6	23.4
From 25 yrs. up..	128	87	41	67.97	32.03

ANALYSIS ACCORDING TO STAGE OF DISEASE.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
1st week.	8	4	4	50.	50.
2d "	78	55	23	70.6	29.4
3d "	135	104	31	76.9	23.1
4th "	57	36	21	63.2	36.8
5th "	32	25	7	78.2	21.8
After 6th week. .	18	13	5	72.3	27.7
During relapse. .	24	13	11	54.2	45.8

ANALYSIS ACCORDING TO TIME BETWEEN PERFORATION AND OPERATION.

	Cases	Deaths	Re-covers	Deaths	% Re-covers
Under 12 hours. .	187	123	64	65.8	34.2
From 12 to 24... .	109	82	27	75.3	24.7
Over 24 hours. .	117	92	25	78.7	21.3

REPORTER AND REFERENCE	No.	AGE	WEEK OF DISEASE	TIME OF OPERATION	RESULT
Francis T. Stewart (Am. J. Med. Sci. 1904, vol. 127, p. 795.)	1	10	2d	12 hours	death
	2	23	5th	48 "	death
	3	19	3d	14 "	death
	4	23	3d	12 "	death
	5	30	...	...	death
	6	42	...	...	recovery
	7	9	2d	3 "	recovery
	8	41	2d	19 "	death
Louis Frank (Jour. A. M. A., 1904, vol. 42, p. 878.	9	32	3d	60 "	death
W. J. Taylor (Annals of Surgery, 1904, vol. 39, p. 118.)	10	..	...	...	death
	11	..	...	...	death
R. P. McReynolds (Annals of Surgery, vol. 39, p. 118, 1904.)	12	..	...	...	death
	13	..	...	...	death
	14	..	...	...	death
	15	..	...	...	death
	16	..	...	...	death
G. L. Hays (Jour. A. M. A., Dec. 31, 1904.)	17	24	5th	14 "	death
	18	30	3d	9½ "	death
	19	27	2d	...	death
	20	30	3d	10 "	recovery
	21	21	1st	12 "	death
	22	21	4th	13 "	recovery
	23	24	2d	12 "	death
	24	15	3d	19 "	death
	25	29	3d	3¾ "	recovery
	26	14	4th	4 "	recovery
	27	19	5th	9 "	recovery
	28	24	5th	7 "	death
J. H. Anderson (American Medicine, 1904, vol. 8, p. 1129.)	29	..	...	36 "	recovery
	30	..	...	" "	recovery
	31	..	...	" "	recovery
	32	..	...	" "	death
	33	..	...	" "	death
	34	..	...	" "	death
	35	..	...	" "	death
	36	..	...	" "	death
	37	..	...	" "	death
	38	..	...	48 "	death
	39	..	...	" "	death
	40	..	...	" "	death
	41	..	...	" "	death
	42	..	...	" "	death
	43	..	...	" "	death
	44	..	...	" "	death
	45	..	...	" "	death
	46	..	...	" "	death
James H. Dunn (N. W. Lancet, 1904, vol. 24, p. 167.)	47	46	3d	5 "	death
John H. Jopson (Archiv. of Ped. 1904, vol. 21, p. 195.)	48	6	2d	24 "	death
Wm. Stewart Fulton (American Medicine, 1904, vol. 7, p. 699.)	49	14	2d	6 "	recovery
Byron W. Davis (Jour. A. M. A., 1904, vol. 42, p. 1332.)	50	17	3d	37 "	death
	51	22	3d	12 "	death
E. W. Goodall (Lancet, 1904, vol. 2, p. 8.)	52	17	4th	12 "	death
	53	35	1st week of relapse	20 "	death
H. C. Drury and Wm. Taylor (Med. News, 1904, vol. 84, p. 890.)	54	21	...	8 "	death
J. Chalmers Da Costa (Annals of Surgery, 1905, vol. 41, p. 284.)	55	34	2d	24 "	recovery
R. G. Le Conte (Medical News, 1904, vol. 84, p. 890.)	56	38	2d week of relapse	6½ "	recovery
(do, p. 405.)	57	21	3d	5 "	recovery

REPORTER AND REFERENCE	No.	AGE	WEEK OF DISEASE	TIME OF OPERATION	RESULT
Dr. Chalmers Da Costa, (Annals of Surgery, 1905, vol. 41, p. 284.)	58	..	...	.....	death
	59	..	...	.....	death
	60	..	...	.....	death
	61	..	...	.....	death
	62	34	3d	24 "	recovery
Gibbon (Annals of Surgery, 1905, vol. 41, p. 287.),	63	..	...	.....	death
Walter Courtney (Jour. A. M. A., 1905, vol. 45, p. 1720.)	64	30	4th	12 "	death
	65	25	5th	17 "	death
	66	20	3d	2 "	death
	67	24	2d week of relapse	3 "	recovery
	68	43	3d	3 "	death
Geo. B. Ebright and Thos. W. Huntington (Jour. A. M. A., 1905, vol. 41, p. 284.)	69	38	7th	2 "	recovery
H. F. Vickery and Farrar Cobb (Boston M. & S. Jour., vol. 156, p. 177.)	70	10	4th	6 "	recovery
Jerome B. Thomas (Jour. A. M. A., 1905, vol. 45, p. 1494.)	71	25	3d	10½ "	death
	72	25	5th	4 "	recovery
J. P. C. Griffith (Am. Jour. Med. Sci., 1905, vol. 130, p. 855.)	73	12	4th	41 "	death
	74	6	2d	19 "	death
Chas. L. Scudder, (Boston M. & S. Jour., vol. 153, p. 84.)	75	21	4th	24 "	recovery
Butler (Jour. A. M. A., 1905, vol. 45, p. 1475.)	76	11	3d	.....	death
	77	5	2d week of relapse	12 "	death
Woolscy (Annals of Surgery, 1906, vol. 43, p. 446.),	78	17	...	6 "	recovery
(do, 1906, vol. 42, p. 927.)	79	12	4th	18 "	recovery
	80	25	8th	9½ "	recovery
Chas. Peck (Annals of Surgery, 1906, vol. 42, p. 931.)	81	....	3d	5 hours	death
	82	....	3d	5 "	death
	83	....	3d	2 "	death
Francis L. A. Greaves (British Med. Jour., vol. 1, p. 376, 1906.)	84	5	3d	1 "	death
	85	5½	2d	1 "	recovery
C. S. White (Wash. Med. Annals, 1906-7, vol. 5, p. 361.)	86	28	2d	2 "	recovery
Jos. A. Blake (N. Y. Med. Jour., 1907, vol. 85, p. 338.)	87	16	...	3 days	recovery
John W. Long (Surgery, Gynec. & Obstet., 1907, vol. 4, p. 304.)	88	22	5th	5 hours	death
	89	25	4th	8 "	recovery
Otto G. T. Kiliani (Annals of Surgery, 1907, vol. 47, p. 34.)	90	40	4th	1 "	death
F. B. Lund (Boston M. & S. Jour., 1907, vol. 157, p. 336.)	91	30	4th	5 "	recovery
A. Lewin Sheppard (Lancet, 1907, vol. 1, p. 1293.)	92	20	4th	26 "	death
	93	19	7th	2 "	death
J. E. Allaben (Jour. A. M. A., 1907, vol. 49, p. 556.)	94	17	3d	37 "	death
W. A. Batchelor (Jour. A. M. A., 1907, vol. 49, p. 568.)	95	..	3d	8 "	recovery
Jules F. Menestrina (Med. Fortnightly, St. Louis, Aug. 10, 1907, vol. 32, p. 378.)	96	..	2d	1 "	death
A. McPhedran (Canada Lancet, 1906-7, vol. 40, p. 580.)	97	32	3d	26 "	death
	98	65	...	5 "	death
Frederick J. Cotton (Boston M. & S. Jour., 1906, vol. 155, p. 151.)	99	13	3d	3 "	recovery
L. W. Glazebrook (Va. Med. Semi-Monthly, 1907-8, vol. 12, p. 498.)	100	8	4th	24 "	recovery
Geo. L. Hays (Pa. Med. Jour., vol. 11, p. 255.)	101	25	4th	12 "	death
	102	20	4th	4½ "	death
	103	29	4th	25 "	death
	104	21	4th	3 "	death
	105	8	2d week relapse	8 "	recovery

REPORTER AND REFERENCE	No.	AGE	WEEK OF DISEASE	TIME OF OPERATION	RESULT
Geo. L. Hays (Pa. Med. Jour., 1907-8, vol. 11, p. 255.)	106	28	4th	5½	recovery
	107	25	3d	6	death
	108	17	1st	17	death
	109	44	3d	19	death
	110	34	3d	17	death
	111	15	4th	30	death
	112	30	2d	4½	recovery
	113	21	3d	8½	recovery
	114	22	2d	36	death
	115	20	3d	5	death
Geo. Woolsey (Annals of Surgery, 1906, vol. 43, p. 660.)	116	20	4th	5	death
J. E. Greiwe (Lancet-Clinic, 1907, vol. 48, p. 133.)	117	26	2d	5	death
	118	50	4th	5	death
and J. R. King	119	53	2d	5	death
M. Kaehler (Deut. Med. Wochen., vol. 33, p. 1370, 1907.)	120	16	1st week relapse	24	recovery
	121	16	1st week relapse	3	death
	122	15	2d week relapse	5	death
Geo. Douglas Head, 1906	123	29	3d	10	recovery
" 1907	124	30	1st week relapse	24	death
	125	47	4th	5	death
J. D. S. Davis (Am. Jour. Obstet., 1908, vol. 58, p. 982.)	126	15	2d	48	death
	127	14	2d	5	recovery
	128	35	2d	5	death
Edward Newell (Cal. St. Med. J., 1908, vol. 6, p. 103.)	129	12	3d	3	recovery
Albert J. Roberts (Annals of Surgery, 1909, vol. 49, p. 392.)	130	17	3d	3	recovery
Dr. Walton Martin (Annals of Surgery, 1909, vol. 48, p. 133.)	131	42	4th	5 days	recovery
L. W. Hotchkiss (Annals of Surgery, 1909, vol. 48, p. 133.)	132	..	...	3	death
Alfred Jerome Brown (Jour. A. M. A., 1909, vol. 52, p. 695.)	133	17	5th week relapse	1 hour	recovery

DISCUSSION

Dr. John B. Murphy (Chicago): I do not care to take up more of your time this afternoon. I simply want to say in regard to Dr. Head's splendid paper that his analysis of his cases corresponds with my own experience. I am particularly gratified with the stress he has laid upon early diagnosis. The presence of appendicitis in typhoid fever has been rather frequent in my work. I operated on the first five cases of typhoid and appendicitis I saw, and since then I have had six cases on which I did not operate. The differential diagnosis between typhoid appendicitis and appendicitis cannot always be made, but a great deal is suggested by the clinical appearance the patient presents at the time the surgeon is called. For instance, temperature never precedes pain. Nausea and vomiting are induced, and in some cases a temperature is the result. Pain practically always follows nausea and vomiting. In the early cases I operated on, I know I had temperature preceding pain. In three of the six I had fever present before I had inflammation of the mucosa.

The point the doctor laid stress on is this, that at the onset the inflammation is not always marked. Formerly the element of shock was a manifestation of inflammation. If we wait until shock is present we wait until we do an ante-mortem operation.

I have had a number of these cases, and in taking the symptoms in their order we might consider, first, shock coming late in typhoid; second, nausea and vomiting; third, not necessarily an elevation of temperature; and, fourth, an increase of local manifestations.

Carrying out the thought in the doctor's paper, his experience is, that if we are to save these lives we must operate early. They are already overburdened with the intoxication of typhoid, and if they are permitted to get any considerable absorption of the product an operation will be merely ante-mortem.

Dr. L. A. Nippert (Minneapolis): The first person on whom the responsibility for diagnosis rests in perforation in typhoid is the nurse. The nurse is with the patient continually, and if she overlooks the first symptoms of perforation the operation may come too late to be successful. I had an unfortunate experience by having a perforation in a patient take place at three o'clock in the afternoon, and I did not know anything about it until seven or eight o'clock, the nurse having paid no attention to the pain in the right side. I wish to emphasize these two points, pain and rigidity in the affected side.

Dr. W. H. Magie (Duluth): I wish to add my small experience to this discussion, an experience very

unfortunate. I have operated on five cases of perforation of the intestine following typhoid, and they have all died. The two last cases occurred a year ago last March during a little epidemic of typhoid fever on the Iron Range. One of these cases I anticipated. I was sure that perforation had taken place or was about to take place. The man was very ill, but I thought I was in time. I was in time, but the intestine had perforated, but not in the general cavity of the abdomen. It had walled off against a knuckle of the bowel, and, consequently, there was no escape into the abdominal cavity of intestinal fluid. I thought this was an excellent case to get well. I stitched the perforation, but the man died. The other case was in this same epidemic. It was a complete perforation of the bowel with escape of intestinal contents into the abdominal cavity. The operation was done between ten and twelve hours after perforation. They were both hospital cases. In that case we did not attempt to close the opening in the intestine, but merely fixed it to the abdominal wall and put in drainage. The operation did not occupy more than five or six minutes, but the patient died. So my experience has not been very satisfactory. I am glad, however, to hear this paper and this discussion, for it really encourages more surgeons to do the operation, for once in a while if we persist in the attempt we may cure some of these cases that would otherwise have died.

I have seen two cases of distinct perforation of the bowel recover without operation. One was a young woman twenty-odd years old who had the clinical symptoms with collapse, and we expected she would die in a few hours, but she got well. The other was a young woman of nineteen who had perforation, and I recommended operation, but the people would not consent, and this patient got well also.

Dr. H. E. Robertson (Minneapolis): In the last five years I have performed twenty autopsies on patients who died of typhoid fever, and in every one there was ulceration of the lower portion of the ileum. Five were cases of perforation with peritonitis unrecognized during life. In every one of these cases one could tell by examination of the chart what time perforation had occurred. The attending staff man should caution the internes and nurses on his service to warn him of the slightest change of any character in his typhoid patients, whether it is a sudden rise or fall in temperature, a sudden pain or a sudden lack of pain, sudden changes in pulse, respiration, posture or expression, or any other feature that is marked in contrast to the previous condition. Peritonitis may occur in typhoid fever as the result of an abscess in the mesenteric lymph-nodes. I have performed two autopsies on cases that had such abscesses. This should always be taken into account when searching for the cause of the peritonitis at operation or autopsy.

Dr. Archibald MacLaren (St. Paul): I want to go on record with a case that did not recover. This case seemed to be a very favorable one and occurred in a young man about twenty-five years of age, where perforation was recognized by the nurse in the first eight hours, so that an early operation could be performed. The greatest help is found when looking for these perforations by straightening the cecum and working over to the left following the ileum, a small perforation being easily found. In this case we found a small per-

foration leaking gas and fecal matter, which was closed, but the patient lived only a short time.

Dr. H. P. Ritchie (St. Paul): The case referred to was supposed to be an appendiceal abscess occurring in the fourth week of typhoid fever. The abscess was not recognized at the time of perforation, but was taken care of later as an ordinary appendiceal abscess by drainage. One year after recovery this patient developed a cyst of the ovary and was opened for the removal of that tumor. There was no evidence that the appendix had ever been perforated, but on the ileum near by was a place where the omentum had attached itself with evidence of perforation at that point, so we believe this is a case where perforation of the typhoid ulcer had occurred and was not recognized until a localized abscess was formed.

Dr. Arthur T. Mann (Minneapolis): I wish to say a word or two because one of the cases reported by Dr. Head was one of my own. The perforation occurred during the course of typhoid fever in an interne of the Northwestern Hospital about two years ago. The diagnosis of perforation was made by Dr. Head, who called me in to confirm it and to consider the advisability of operating. The case was slightly obscure in symptoms, and, in the early stage in which we saw him, it was fairly difficult to make a positive diagnosis of perforation. The case was complicated by an old operation for appendicitis with perforation of the appendix and prolonged drainage of pus afterwards, leaving this region, which was also the site of his present symptoms, with undoubted bowel adhesions. However, there were abdominal pain and moderate localized tenderness. Without question there had been a sudden change in the abdominal condition of the patient with an onward march of symptoms. In the absence of a complete history of all the signs which go to make up a classical picture of unquestioned perforation, the sudden onset of pain, the local tenderness, and the progressive picture of the symptoms, made it evident that something was going on in the abdomen which demanded an exploration and would require surgical interference in all probability. On these grounds the only rational diagnosis to make was that of a perforation, and the only advice admissible was that of immediate operation. Delay would be too dangerous and would increase greatly the chances of a septic peritonitis.

On incision the abdomen showed a fair amount of a turbid, slightly darkened fluid, with old adhesions about the appendix region. Upon systematic search a perforation was found about fourteen inches from the ileocecal valve in the small intestine with this fluid welling out in small waves as the intra-abdominal pressure changed under the influence of the respirations and other muscular conditions. It corresponded fairly well with the free fluid already present in the abdominal cavity. The places of a number of other typhoid ulcers were seen which had not perforated and some of which were covered over with a thin sheet of coagulated fibrin. These were not disturbed.

As three-fourths of these cases of perforation are within twelve inches of the cecum, the search for them should always be systematic and begin at the ileocecal valve. This is a cardinal principle in the operative procedure. The second cardinal principle is to get out

of the abdomen as soon as possible after the perforation has been closed.

The perforation was closed promptly in our case with a purse-string suture backed up by a row of continuous Lembert sutures. A fair amount of the fluid was allowed to soak up into a few abdominal gauze sponges. He was then sewed up tight without drainage, and he went on through a good convalescence without further troubles.

The paper which we have just heard shows the decreasing mortality as the result of operative interference. It shows also, plainly, the fact that early diagnosis and early operation are the prime elements of success. If we wait until peritonitis comes on, we have not only perforation but peritonitis to deal with.

So in these cases where the diagnosis is usually in doubt, if something has happened in the abdomen, especially if it starts in with pain and subjective symp-

toms, and the objective conditions continue to increase, they become surgical cases and should be offered the percentage of safety which operation brings.

Dr. Head (Essayist): In the cases that I have seen there had been no evidence of the walling-off of the perforation. In those cases reported where recovery has occurred without operation, the existence of perforation may always be called into question.

A diagnosis of perforation is never certain unless the perforation is found either at operation or at autopsy. I am sure any man who has seen the abdomen open and seen the fluid flowing out, without any effort on the part of nature to wall it off, must be convinced that the necessary thing to do in perforation of the bowel is to open the abdomen as soon as possible and close the perforation. This should be done rapidly and without delay.

A CASE OF FRACTURE OF THE NECK OF THE FEMUR*

By H. C. WINDELL, M. D.

WILLISTON, N. D.

Perhaps no bone lesion of the body has had more attention given it than fracture of the femoral neck, and in scarcely any other fracture must our prognosis be more guarded; in fact so unfavorable is the prognosis given in cases of this kind, and so unsatisfactory have been the results in most cases, that it might be of interest to notice the prognoses given by leading writers in surgery and to consider some results reported by leading practitioners.

Da Costa, in reference to cases of this fracture, says: "Permanent shortening to some degree is inevitable, and the function of the joint is sure to be more or less impaired."

Wharton & Curtis write as follows: "There are, however, occasionally seen cases in which patients recover with fairly useful limbs in spite of considerable shortening."—"Practice of Surgery."

Gross almost denies the possibility of bony union.

Von Bergmann states that "the earning efficiency of the patient is not restored, however, when union is complete."—"System of Surgery."

The literature contains many reports of results in these cases none of which are very encouraging.

Senn experimentally got bony union only by open operation, and was able to collect only fifty-four cases of bony union from the literature. (Senn, *Annals of Surgery*, 1904.)

Ruth on one occasion presented at a meeting of the American Medical Association a femur removed from a patient who had been treated some years before. In this case bony union was complete, and Ruth's measurements showed very little shortening. Ruth's apparatus for treatment was somewhat complicated. A full description of it was given in the *Journal of the American Medical Association*.

Ochsner reported sixteen cases treated by Ruth's apparatus. These patients ranged in age between thirty and eighty years. In all of these cases he obtained bony union with an average shortening of about one inch. This was practically the same as obtained by Ruth. I have been unable to find any other report as favorable as this. (Ochsner, *Annals of Surgery*, 1904.)

The methods of treatment ordinarily used are described at length in various works on surgery. They consist mainly of longitudinal extension with certain modifications to secure internal rotation of the limb and elevation of the great trochanter.

In an issue of the *Journal of the American Medical Association*, a surgeon, after writing at considerable length about the almost universally bad results in lesions of this kind, describes an apparatus for their correction which may be a success, but which fills the room with an incomprehensible network of elaborate machinery. Now, I believe, in this as in all other fractures, the simplest mechanism that will secure a desired result is the best.

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

I shall report a case from my own private practice and describe the method of treatment used. The results in this case and in one other were so satisfactory that perhaps a description of the device used may be of service to some one. Its extreme simplicity must recommend it, and if results such as were obtained by its use in these cases can be even occasionally attained it is surely worth a trial.

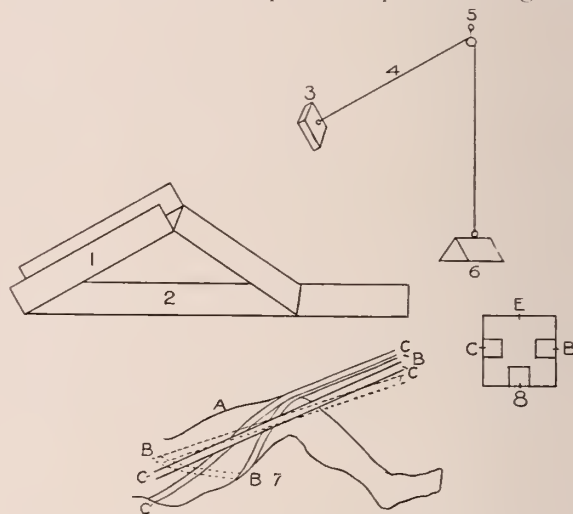
I have had under my care only two cases of this fracture, both of which were treated in the same manner. I shall report one in detail, merely noting the result in the second case.

On the morning of January 19, 1906, a man of 39 years, of medium size, of good family and personal history, fell with some violence on a hard floor and was unable to rise. I found him lying as he had fallen and complaining of severe pain in the region of the right hip. The leg was lying helpless and everted. He was removed to his room and anesthetized, when an examination revealed the nature of the lesion. Regarding the diagnosis, it is sufficient to say that the classical symptoms, such as are amply described in all text-books of surgery, were present. The fracture was unimpacted, and the shortening was one and one-quarter inches. The patient was thin, and on palpation the outer end of the upper fragment appeared to be slightly tilted upward when the patient was recumbent. Another physician was present, and bringing the fragments into as good apposition as possible, we applied a Buck's extension and used sand-bags to support the limb and secure internal rotation. During the next three days the patient complained of intense pain in the hip and also of the inconvenience of the extension apparatus. Pain was present in the lower leg and heel in spite of all contrivances to avoid it. His condition was so very unsatisfactory that some change had to be made. Having in mind the position of the head of the bone at the examination, and believing that the action of the external rotators could be fully as easily overcome with the thigh flexed as extended, and thinking the gluteals could be successfully resisted by the increased weight which I thought could be borne if the extension were applied only to the thigh rather than to the leg. I used the mechanism about to be described.

A contrivance resembling the inclined plane splint of Bell, but with sides on the proximal part of it, was made and fixed at an angle of about forty-five degrees, as shown in the above cut. It was now padded with cotton. The patient was again anesthetized, and the thigh flexed to an

angle of about forty-five degrees. The leg was then flexed on the thigh at the same angle. In this position it was possible to get good apposition of the fragments when the limb was rotated inward and the great trochanter elevated.

The limb was placed in the box, the thigh resting in the trough, the angle under the knee and the leg resting on the distal inclined plane of the apparatus. An adhesive strap reaching from the great trochanter to about ten inches beyond the knee was applied to the external side of the thigh. (Strap *c* in cut.) Another strap *d* was applied parallel to strap *c* on the inner side of the thigh. These straps were then passed around a block of wood (8) about four inches in width, which was held in line with the thigh by an assistant. Another strap *a* was passed along the



LEGENDS FOR WINZELL

1. Trough in which the leg rests.
2. Board to which the trough is attached.
3. Block to receive adhesive straps.
4. Rope passing through the block and pulley.
5. Pulley attached to post at the foot of the bed.
6. Weight of fifteen or twenty pounds.
7. Diagram showing the position of adhesive straps on the leg. The dotted lines represent straps on the inside of the leg.
8. Block showing the order of attaching the straps to the block.

interior surface of the thigh, reaching out to, and passing under, the block, to the distal surface of which it was fastened at right angles, to the attachment of the lateral straps *c* and *d*. Three straps now encircled the thigh to hold these straps in position. These latter straps do not appear in the cut. The two lateral straps secured extension while the anterior strap was meant to serve as an anchor for the appliance used to maintain the required internal rotation.

Through a hole in the center of the block of wood a rope was now inserted and made fast, as shown in the cut. This rope was passed over a

pulley fastened on top of a post at the foot of the bed at such a height as to keep the rope in line with the thigh. To the distal end of the rope was attached a weight of about twenty pounds. An adhesive strap *e* was now applied, beginning at a point about one inch on the proximal side of the great trochanter and slightly below it. The strap passed along the external surface of the thigh, leaving the skin at the upper part of the knee, and, given a half turn, was attached to the lower side of the anchor strap between the knee and the block. While this appeared to be almost enough to maintain sufficient internal rotation and elevation, it was reinforced by another strap *b*. This strap, starting on the inner side of the thigh close up to the groin, passed under the limb along the external surface of the thigh, turned up over the knee, and was attached to the under side of the anchor, close to the attachment of strap *e*. The dressing was complete. From this time on the patient made no complaint of pain, and all trouble with the leg and heel was at an end.

The additional weight required to overcome the action of the gluteals in this position was much more easily borne than was the lesser one when applied to Buck's straight extension.

The fragments remained in excellent apposition, and the limb could be examined readily without any moving or alteration of the dressings. I took practically all care of this patient personally, as efficient nurses could not at that time be obtained. In this way I was able to watch more closely than usual the progress of the case.

The perfect freedom of the leg, which could be regularly bathed and attended, rendered it free from the troubles always attendant upon any prolonged occlusive dressing of this part. The patient made uninterrupted progress, remaining in bed scarcely five weeks. In six weeks he was moving about on crutches and allowing passive movement of the hip-joint. In a little more than two months he walked without a cane, and in less than four months he was doing his ordinary farm work without inconvenience. The man has absolutely no deformity—no shortening whatever—and has full functional use of the limb. In fact, in speaking to me, he said: "Ex-

cept by memory I have no means of knowing which leg was broken."

The second patient, Mrs. N., aged 55 years, was treated in the same way at the first dressing. She made a full recovery in a little over five months, with no deformity, no shortening, and with full functional use of the limb. I used this dressing in this case believing the upper fragment to be in the same position as in Case 1, though on account of excessive fat I could not verify this by examination. The results, however, showed that the fragments must have been held in good apposition by the dressing.

I believe that in these fractures it is a mistake to attempt to maintain a good juxtaposition of the fragments with the limb extended in line with the body. I believe flexion of the thigh to be a necessity. The capsule of the joint is torn, and we have remaining to act on the head and neck of the bone only the ligamentum teres and the obturator externus muscle. If in this condition the ligamentum teres can act at all it must tend to tilt upward the outer end of this fragment from its point of attachment to the head of the bone and the acetabulum. The rigid transverse ligament tends to hold it in this position also. But most important of all is the fact that when the shaft of the femur is pulled upwards, so that the great trochanter is above Nelaton's line, the obturator externus is pressed against the back of the neck and the head of the bone, and thus, by purely mechanical action, it presses it forward, or upward when the patient is recumbent. In a case of fracture of this sort there is nothing to resist this tendency, as the position of the femur and great trochanter with the relaxation of the fascia that accompanies this condition, leaves an almost open space about the outer end of the upper fragment; so the head and neck of the bone are fully supported in this position by the transverse ligament and the body of the obturator externus. Therefore to adapt the lower fragment to this aspect of the upper, and to maintain it there, we must flex the thigh to an angle of about forty-five degrees and fix it there; at least this was my line of reasoning, and while I have had only two opportunities to put it into practice, the results in each case have been so satisfactory that I believe the method of treatment is worthy of consideration.

ENTERITIS IN INFANTS AND ITS DIETETIC TREATMENT*

BY H. D. NEWKIRK, M. D.

MINNEAPOLIS

Of all the subjects discussed by pediatricians today, diseases of the alimentary tract probably hold first place. Text-books in the past have been pretty well agreed in the matter of causes of bowel troubles, and our treatment has been based largely on those theories, but, of late, investigations along these lines, more or less revolutionary in character, have compelled us to modify our former views and even, in instances, to make a radical change.

Diarrheal diseases of infancy have never had a very definite line of demarcation, and this is rightly so, for it is practically impossible to have an inflammatory reaction in one spot without more or less trouble in other neighboring localities. We may have all grades, from a simple, acute enteritis involving the tract above and below, in a mild degree, to a chronic condition involving not only the gut itself, but the whole substance of the body.

Formerly, we believed the cause of diarrheal diseases to be largely of mechanical or bacterial origin, but investigations have demonstrated that we must modify our views in the matter. These are certainly factors, but not of as much importance as we once supposed. They are secondary, and increase the trouble when once begun. They act like teething to a neurotic child, simply as the "last straw which breaks the camel's back," and forces the matter to the attention of the family and physician. The real trouble begins before the diarrhea, and may have been at work for a long time undermining the system, and preparing the way for the more noticeable and acute symptoms.

Finkelstein and Meyer, in their recent investigations, have been able to demonstrate that the main cause of diarrhea in infancy is the disturbance of balance between food elements taken into the alimentary tract and food requirements, not alone in regard to quantity, but more particularly in regard to the relationship of individual constituents. Certain factors enter in which may make the ability of the child to assimilate elements vary to a considerable degree. Tuberculosis, syphilis, or deficient thyroid cases may so alter and weaken the system that very slight changes in the food elements quickly cause

trouble. Excessive humidity of the atmosphere or poor surroundings may be an important predisposing cause, but even these cases can maintain their balance if the food is right. However, if there is any marked disturbance in balance for any considerable length of time, not only those weakened by systemic diseases, but normal, healthy children will become affected with diarrheal disorders.

We formerly laid all the trouble, or the larger share of it, to our old friend the proteid, for we saw white curds in the stools and knowing the casein to form white curd we immediately said that our trouble was with proteid, and rested, but, basing our treatment on this supposition, oftentimes our cases did not improve. Once the balance is disturbed among the food elements, bacterial action may begin, our trouble is greatly augmented, and the situation is complicated, decomposition sets in, and absorption of toxins follows.

Pathologically, we find present all degrees of inflammation of the alimentary tract, from stomatitis to proctitis, and, in the more chronic cases, glandular hypertrophy and atrophy, cloudy kidney, and all grades of secondary anemia, depending on the severity of the intoxication and promptness of treatment.

The symptoms are well known: restlessness, loss of appetite, pain, fever according to the toxemia, frequent loose acid, green (supposedly due to the change of bilirubin to biliverdin), mucous, or bloody stools, with tenesmus. If chronic we are apt to find the main trouble in the large intestine, evidenced, not so much by fever, as emaciation with frequent, green, mucous, or bloody stools.

The treatment in such cases naturally is dependent on the cause. If secondary to a gastritis or a mechanical irritant, the stomach and intestines manifestly should be cleared first. For this purpose nothing is better than castor oil if there is no vomiting, or calomel if vomiting is present, but calomel itself produces a green stool and must not be discontinued simply because the stools are green. Stomach-washing with an alkaline solution to allay vomiting and dissolve mucus, is important, as well as a thorough irrigation of the lower bowel. Following this cleansing, a twenty-four hour rest with a

*Read before the Hennepin County Medical Society, April 3, 1911.

little boiled water is certainly advisable. After this, proper food must be given, but here is where we come to the parting of the ways.

In a breast-fed child it is usually safe to follow with the breast on the third day, making a dilution by giving boiled water before each feeding and lengthening the intervals of feeding. Such dilution should be continued during excessively hot weather, since a child requires less food in summer than in winter. Breast-milk seems to have a certain bactericidal effect, hence we do not hesitate to return to it or use it in the midst of diarrheal disorders. In the bottle-fed the classical treatment has been initial cleansing of the tract, boiled water for twenty-four hours, then a course in barley water, whey, peptonized milk, and modified raw milk. This method is on the supposition that the proteids are at fault. In such cases an analysis of the stools is of marked benefit, since it gives us a hint at what element is undigested. Curds may be present, and these may be proteid and fat, or either one. True curds formed by the action of HCl or lactic acid on the paracasein are hard, smooth, yellow outside and white within, with a cheesy odor, and will not dissolve in ether. Fat curds are smaller, not so tough and do dissolve in ether. A foamy, bubbling acid stool is usually of sugar origin. The reaction is of value, for if our stool is alkaline and loose we have proteid decomposition; but if acid or even if the litmus is unchanged, acid fermentation is going on, due to the breaking down of fats and carbohydrates. Blood and mucus may be readily detected, but we should remember that a certain amount of mucus is normal if well mixed through the stool.

Since the examination of the stools has become common practice, we find the proteids less often at fault than was formerly supposed; in fact the curds we once supposed to be simply undigested casein often are only curds formed by substances in the lower bowel. We have learned that the fats and sugars play a more prominent part; also that the salts are to be reckoned with. Some investigators even are willing to lay all or most of the fault in diarrheal disorders to the salts and sugars in the milk, and believe that casein has no more harmful influence on infant digestion than water. They appear to have made their point good, for in their clinic the problem has been given a fair test. Others in this country have demonstrated the same fact. Finkelstein claims to have

taken groups of healthy infants, and by increasing the salts and sugars caused diarrheal disorders, the disorder being due to fat in the presence of an excess of salts and sugar. Also groups of children with all varieties of enteritis, even to marasmic conditions, have been cured by reduction of salts and sugar constituents and being given an almost wholly casein diet.

The part that bacteria play in diarrheal disorders is, as we have said, secondary, and a hard matter to determine exactly, but we certainly do know that, once the balance of assimilation is disturbed, bacteria are very quick to assert themselves. Many varieties have been demonstrated—the ordinary colon bacillus, Shiga bacillus, and others too numerous to mention, most of which are as yet but poorly understood. A few points, however, have been demonstrated with considerable certainty, and one of them is that lactic acid bacilli seem to be inimical to the myriads of hostile bacteria within the tract. Also we note that the particular form bacillus acidophilus of the lactic-acid group is normally found in the large intestine, and bacillus bulgaricus is normally found in the small intestine, the clinical significance of which fact will be referred to later.

With this knowledge before us the matter of treatment becomes all-important. If our case, by analysis of the stool, shows itself to be plainly one of proteid incapacity, a reduction of proteid is all that is necessary, provided the case has not gone on and formed lesions from bacterial action. The same holds true of early fat, sugar, and salt irregularities. The dietetic treatment of such cases in the later stages has been rather varied, but agreeing in the main in certain important points, namely, reduction of sugars and fats, increase of casein and addition of lactic-acid bacteria. The different foods used are (1) plain buttermilk, (2) artificial buttermilk made from the two strains of lactic-acid bacilli, (3) buttermilk cooked with flour and sugar, and (4) casein milk. Plain, fresh buttermilk, raw, has a composition of proteid 2.6; fat, .6; sugar, 3, and is used largely as an infant food in some countries, especially Holland. The chief advantages claimed for this food are that the fats and sugars especially are low, and the casein is coagulated in the form of casein lactate, and it contains much lactic acid and many lactic-acid bacteria. This form of food is used in either acute or chronic conditions and at all

ages. The disadvantages are that at first the infant may not like to take it, and it may even cause vomiting, but if persisted in it will show good results in three or four days. Trouble is often experienced in getting back on to fresh milk. In its favor may be said that the stools quickly become normal, and the infant begins to gain in weight.

Artificial buttermilk made from the cultures is a good deal like the raw product, but can be controlled in the making more definitely. As was mentioned previously, two varieties of lactic-acid bacteria are most used, the bacillus acidophilus, found normally in the large intestine and therefore used when the lesion seems more marked in that region, and the bacillus bulgaricus when the lesion is in the small intestine.

Buttermilk with flour and sugar added is frequently used. One quart of buttermilk is cooked for twenty minutes, suitable dilution with barley water is made, and cane sugar is added to make up the caloric value. The good results gotten from the use of this modified buttermilk cannot be due to the presence of lactic-acid bacteria, since the food is sterilized by cooking, but the value seems to lie in the low fat, presence of lactic acid, and changed proteid.

Still another food used in diarrheal diseases is casein milk exploited largely by Finkelstein in his clinic. The method of preparation is as follows: heat one quart of milk to 100° F, add one-half ounce essence of pepsin, and stir well; allow to stand at same temperature one-half hour, then filter. Force the curd through a fine sieve several times, and add one pint of water and one pint of buttermilk. The composition of this mixture is, proteid, 3% ; fat, 2.5% ; sugar, 1.5% ; salts, 0.5%. One quart of it con-

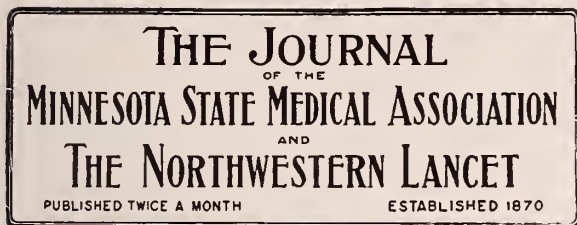
tains 370 calories. The food is used in all grades of intestinal disturbances, and the results have been very gratifying. This feeding can be used for some time till the stools are normal, and a gain in weight has begun, when return should be made to the regular milk mixtures.

In conclusion, I think we can safely say that the newer methods in the dietetic treatment of diarrheal disorders are a distinct advance over the old routine, although it is very hard to say just what element is the main factor in the treatment. The results, clinically, show that the diarrhea stops much quicker than by any other method, and a satisfactory gain in weight soon occurs. Care must be taken, however, that none of these forms of feeding be continued too long, for rickets and scurvy may occur, and have occurred, from a too long continuance of these seemingly irrational diets. The malted foods, especially malt soup, are valuable at this point to more rapidly increase the weight. Another important point to remember is that calorimetric standards must be maintained, for over-feeding is as bad as under-feeding or poor feeding.

We believe that this subject never will, or can, be arbitrarily settled, since the infant's stomach and the test-tube never can be made to show like tests; but by a more thorough study of the end-products, chemically and bacteriologically, great improvements have become possible and the brilliant results obtained justify further study along these lines.

REFERENCES

- Chapin and Pisek: Diseases of Children.
Finkelstein and Meyer: Jahrbuch f. Kinderheilkunde, May and June, 1909.
Fowler: Infant-Feeding.
Brady: Archives of Pediatrics, June, 1910.
Leopold: Archives of Pediatrics, August, 1910.
Kendall: Archives of Pediatrics, 1910.
Meara: Jerome Cochran Lecture, 1910.



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Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

AUGUST 1, 1911

OPEN-AIR SCHOOLS

At the present time when so much is being done to conserve the lives of the weak and defenseless and often the mentally and morally degenerate members of the community, the prevention of disease has assumed an added economic importance, and the future of the race has become a matter of anxiety. The constantly falling birth-rate in all civilized communities would be a matter of little consequence if only we could be assured of the quality of the race, but the fact is that that portion of the community which we look upon as the desirable element, has reproduced itself less than one-fourth as rapidly as the so-called undesirable element. Out of this condition the youthful science of eugenics—or the study of the best means of rearing a better race—has been evolved and one of the earliest subjects to receive attention is the condition of the children in the public schools.

As a consequence, we have laws against crowding children into basement schoolrooms, modern school buildings are built with some attention to light and air, and an ample playground is looked upon as an essential in every up-to-date school. These things, however, do not wholly suffice, for, in spite of a low birth-rate, school children increase more rapidly than school boards seem able to provide new buildings, and it is common knowledge that the best

ventilating systems do not necessarily ventilate, and a perfect ventilating system is as yet a matter of theory. But, in addition to the constant problem of caring for the average child, there is always the exceptional child who is particularly easily influenced by unfavorable environment. In this class is included children infected by tuberculosis, who, for the other children's sake, should not be permitted to associate with them; children suffering with chronic heart trouble, with anemia, or with other conditions lowering their vitality to such a degree that they can scarcely get to school, and even if in school could not take the ordinary curriculum; and, finally, the children who, for one reason or another, show retarded mental development. For such children the open-air school has been evolved.

For the average child the strain of school-life is considerable, but for these classes it is almost unbearable. The long hours of confinement in rooms over-heated, with insufficient moisture in the air and with entirely insufficient ventilation, so benumb their already inactive minds that the necessary tasks cannot be performed.

In the open-air schools that have been provided, this state of affairs is completely changed. Children who made little or no progress under older methods are found alert and able to do the full work of the ordinary child; their feeble, poorly nourished bodies take on the appearance of health; and vacation time is changed from a source of anticipated pleasure to one even of regret.

Up to the present year more than a dozen cities have established open-air schools, and more than as many more are in immediate contemplation; and wherever they have been tried the experience has been favorable. The schools are usually open to children in poor physical condition and may or may not admit tuberculous cases. The schoolroom is often on the roof of some school building and the children are protected by tents from the extremes of weather conditions, but not from ordinary changes of temperature. They receive two or three simple meals at the school and are provided with heavy blanket suits with hoods sufficient to protect them against the coldest weather. They receive a careful examination at admission and at intervals thereafter, in addition to an inspection by the teacher each morning. Any child showing signs of serious physical trouble is treated rather as a patient than as a pupil.

Under these conditions the results have been more than satisfactory as regards the children directly involved, but the benefits have been by no means limited to them. It has taught parents and teachers, what many of them did not formerly know, that even 68° or 70° F. is too warm for clear thinking, as well as for health, and that an abundance of fresh air with a proper degree of moisture and temperature is essential to the best progress in school.

If, as Disraeli has said, the highest business of the statesman is the conservation of the health of the citizens, then let us see to it, not only that fresh-air schools are provided for those that need them, but that every school is supplied with fresh air, properly moistened and tempered, so that every child may receive what in justice is its due,—an education under conditions which build up, rather than destroy, the body.

AN ASSAULT ON THE WORK OF DR. WILEY

The fine hand of the concealed man who has started to undermine the work of Dr. Wiley in Washington is pushing its way to the open surface. Newspapers and magazines are commenting on the effort, and so far the sympathies of the press are on the side of Dr. Wiley. It is claimed that a technical violation of the law is the basis for the removal of the man who has made the pure-food law operative and beneficial. That the government of the United States should object to the payment of sixteen hundred dollars in a year to an expert chemist when it cheerfully, openly, and generously pays many thousands of dollars to lawyers to assist the United States Attorney-General in the prosecution of trust cases, seems almost too ridiculous for comment.

To bring a railroad or an oil company to terms has cost the government hundreds of thousands of dollars, yet no member of Congress presumes to question the right or price of service, but when it comes to the preservation of the health of the public, it will squabble and balk when a few hundred dollars are expended for the services of a medical man.

Evidently, manufacturers of whiskey, food, and drugs who profit by methods of adulteration, are behind the movement to oust Dr. Wiley. The education of Congressmen in matters of this kind is a necessity. Their ignorance may be overlooked, but it is only fair to

ask them to consider in a broader way the work of Dr. Wiley's department before they cripple it in any way. No doubt, many consider Dr. Wiley a fanatic, but when the work of his department is seriously considered there is no question but what enormous good has come out of it.

All adulterators hate Dr. Wiley because he exposes their methods. The same class are attempting to curtail the efforts of the investigating council of the A. M. A. It may be a struggle for supremacy, but in the end the people will demand the protection of the scientist, rather than the poisons of the commercialist.

While the politician occupies the playground the work of the conscientious and practical reformer is obscured.

May Dr. Wiley win!

INEXPERT CRITICISM UPON DR. DOTY

A published attack on the quarantine officer of the Port of New York, Dr. Alvah H. Doty, by Judge Bulger, a member of a commission instructed to report on certain charges against Dr. Doty instigated by Charles Dushkind, attorney for the immigrants, was based upon the fact that Dr. Doty permitted five attendants on cholera cases to testify at a hearing of the investigating commission. Judge Bulger considered that this was a dangerous practice because these persons wore the same clothes as when on duty at Hoffman's Island. Dr. Doty very properly points out that cholera is not carried on the clothing of attendants, and, further, that these five persons were in attendance upon persons held under observation, not upon cholera cases, the latter being at Swinburne's Island.

Dr. Doty requires no indorsement, but criticism from inexperienced sources, relying upon the misinformation of twenty or thirty years ago to check up the leading authorities of today, is a matter which requires strong condemnation.

Judge Bulger would certainly resent or laugh at suggestions emanating from Dr. Doty concerning court procedure. The engineer, the teacher, the physician, the very barber or grocer or bartender would resent or laugh at suggestions from their respective "laymen." Most people have too much modesty and too much good sense to "butt in," with advice, on most technical professions foreign to them. Yet in public health a mere judge, the veriest layman in public health, is not content with suggestions, but, aided and abetted by a lawyer, actually brings

charges against a leading public health authority, not for dereliction of duty or official malfeasance, but on a technicality. Judge Bulger does not qualify his charges. He does not say that if these people are dangerous they should not be allowed at large: he determines himself that they are dangerous, and therefore clamors for punishment! The unconscious, matter-of-fact assumption that, since a lawyer and a judge believe that the clothing of attendants of cholera cases is dangerous, therefore Dr. Doty should be discharged for not believing it, indicates the sublime assurance which laymen usually feel concerning public-health technicalities, especially concerning those of which they know the least.

The bartender, the grocer, the lawyer, all feel that they know public-health principles far better than the professional public-health man. They think that no one needs to study public health to know about it; indeed, the more anyone studies it the less he knows! Hence abolish Dr. Doty and appoint Judge Bulger. The latter can certainly qualify, if he who knows least about public health makes the best public-health officer.

BOOK NOTICES

STATE BOARD QUESTIONS AND ANSWERS. By R. Max Goepp, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Second edition revised. Octavo volume of 715 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$4.00 net; half morocco, \$5.50 net.

This work is one of many designed to assist and promote that kind of last-moment cramming which many candidates for license consider a necessary preparation for examination.

The range of questions covers most of the ground covered by examining boards; in fact they are more up to date than most boards make their questions.

The answers, while incomplete, are, most of them, correct as far as they go, and if given in examination would probably secure a passing mark. It is, however, impossible for a work of this character to avoid the faults of its kind. Though it comprises seven hundred pages, the range of questions is so great that its answers are necessarily fragmentary, and, while candidates might usually profit by an example of conciseness and brevity, one cannot help feeling that when, for instance, the technic of vaginal

hysterectomy is disposed of in four lines, brevity has been rather overdone.

In short, this is a fairly good book of a bad kind. Like its fellows, the time-honored quiz-compend, it does not add anything to the sum of knowledge; it does not present anything in any new or impressive way; and it is not useful as a work of reference. It is intended to enable "weak sisters" to squeeze through examinations which they might not pass without it.

A competent examiner who scrutinized answers carefully could not fail to recognize the style of answer derived from such sources. Having done so, he might not reject the candidate, but would not give him a high marking nor be favorably disposed toward him as a member of the profession. A thoroughly prepared man would not need this book, and one who depends on it is probably unfit to practice.

THE PRACTICAL MEDICAL SERIES. VOL. 1, GENERAL MEDICINE. By Billings & Salisbury. Series 1911. The Year Book Publishers, Chicago, Ill.

This first volume, like the others in the series, gives a very complete and well-arranged series of abstracts of articles along the line of the subject with which it deals. The amount of medical literature in a year has become so enormous that it is impossible for one person to begin to cover it, even in a special line, and so this series enables one to select, on a given subject, the best from the recent literature. This first volume, on general medicine, takes up the infectious diseases; diseases of the lungs, heart, and blood-vessels; the blood and ductless glands; metabolic diseases; and diseases of the kidneys. One who has neglected his journals, or has been too busy to keep up on the recent advances in medical thought, can here find much information and a stimulus perhaps to more and better reading.

GONORRHEA IN THE MALE: A PRACTICAL GUIDE TO ITS TREATMENT. By A. L. Wolbarst. International Journal of Surgery Company, New York, 1911.

In this volume of 175 pages the author briefly, concisely, and practically presents the subject of gonorrhea in a style that is clear and easily grasped. In all that he writes we do not concur, but that is hardly to be expected.

Alkalies are recommended in the acute stage. This may be good practice, but it is theoretically wrong. In acute posterior the drinking of much water is advised, but the author omits to men-

tion that this is bad practice when frequency, irritability, and tenesmus are present.

Vesiculitis is not very clearly differentiated, for the treatment is practically the same as that of the prostate.

For deep urethral instillations he holds to the Keyes-Ultzmann syringe, although the Guyon with flexible catheter is certainly better; at least it inflicts less trauma.

In the treatment of gonorrheal arthritis, vaccines and antigonococcal serum are mentioned as having a permanent place in the therapy of this complication, but he fails to mention either in the treatment of the disease itself.

The use of mild remedies, the strength of which is gradually increased in acute conditions, and a general conservatism of statement, are very commendable.

GYNECOLOGICAL SURGERY. By Comyns Berkley, B. A., M. D., and Victor Bonney, M. D. Large octavo, cloth; 392 black-and-white illustrations, and 16 colored plates. Price, \$5.00 net; by mail, \$5.25. Funk & Wagnalls Company, New York.

This is an English work written from the practical experience of these two surgeons in the Middlesex and Chelsea Hospital, London. It is a very practical work, dealing entirely with the surgical aspect of gynecology. It is not overburdened with a mass of theoretical material, and is notably free from "padding," which mars the excellence of some of our American works.

The authors start out with the intention of giving their own ideas and the ideas of the school to which they belong, and they never deviate from this. The illustrations of the work are almost entirely in black-and-white line-drawings, and while not as beautiful as some of our half-tone illustrations, they really are very clear and illustrate the ideas of the authors very well. There are, in addition, several beautifully executed colored drawings.

There is a chapter on the bearing of the surgeon which is so good that a paragraph from it will not be out of place even in a review:

"The keystone of the surgeon's bearing should be self-control. The man who, when confronted by difficulties, gets flurried and unsteady has mistaken his vocation, however dexterous he may be. The habit of abusing assistants and the instruments, so easily acquired and with difficulty lost, is not one to be commended. This mental incertitude spreads to the other members of the staff, so that at the time when the sur-

geon is most in need of effective help it will fail him. It is the mark of the good surgeon to become more silent as the difficulty of the operation increases; of a bad one to become more loquacious. Speed as an indication of perfect operative technic is the characteristic of a fine surgeon, but in striving after speed for effect, it is the stock-in-trade of the charlatan."

There is one marked characteristic of the work, that is the simplicity of the technic advised. To quote the authors: "The aim of the surgeon should be to use as few instruments as compatible with good work." Simplicity with efficiency should be the keynote of every surgeon. While the work is a small one, it sets forth in detail the indications for gynecological operations, for the pre-operative preparation. The operative technic is vividly described, and every operation is well illustrated, and the dangers and post-operative treatment of every operation are given. A multitude of operations is not given for every condition, but the authors are content to carefully and succinctly describe the one operation they consider the best. This manner of treating the subject makes the work easy to consult and readily conveys the precise ideas of the author. Some of our American authors would do well to follow the example of this book and boil down their excessively padded works to the proportions demanded by the subject.

REPORTS OF SOCIETIES

UPPER MISSISSIPPI SOCIETY

The Society met at Deerwood on July 18th. A visit was made to the mines at Ironton, Crosby, and Cuyuna. At the latter place, proper permission having been obtained, we descended the shaft to the lower level, 300 feet, and were permitted to view the inner workings of an iron mine. Returning to Deerwood a sumptuous banquet was provided after which Dr. Hill addressed the Society along sanitary lines and new work for boards of health.

The next meeting will be held at Wadena.

G. H. LOWTHIAN, M. D., Secretary.

PARK REGION DISTRICT AND COUNTY SOCIETY

The Society met at Alexandria on July 12th, with thirteen members present.

We had a very good meeting and a very good time.

L. A. DAVIS, M. D., Secretary.

FREEBORN COUNTY SOCIETY

The Society held its annual meeting on May 23d at Albert Lea.

The meeting was given up to the transaction of business and the election of officers. Officers were elected as follows: President, Dr. J. V. von Berg, Albert Lea; vice-president, Dr. W. L. Palmer, Albert Lea; treasurer, Dr. J. R. Nannestad, Albert Lea; secretary, Dr. Robert G. Stevenson, Albert Lea; censor, Dr. F. W. Calhoun, Albert Lea.

O. E. RODLI, M. D., Secretary.

NEWS ITEMS

Dr. A. T. Schub has moved from Capo, S. D., to Broadland, S. D.

The Oliver Mining Company is erecting a fine hospital building at Marble.

Dr. J. Anderson has moved from Powers Lake, N. D., to Great Falls, Mont.

Dr. N. A. Nelson has resumed practice at Dawson, where he has been located for several years.

Dr. Hubert Van de Erve has given up practice at Dickinson, N. D., and will locate near Minot.

Dr. R. W. Huffman, a graduate of Queen's College, Kingston, Canada, has located at Evansville.

Dr. Thorvald Peterson, a recent graduate of the College of P. and S., Chicago, has located at Gaylord.

Dr. George A. Brown, of Miles City, Mont., was married last month to Miss Irma Parker, of the same place.

Dr. J. M. Hayes, a recent graduate of the State University, is assisting Dr. C. W. Fogarty, of Browns Valley.

The St. Paul City and County Hospital is asking for \$40,000 with which to build and equip a laboratory.

At the July examinations for license to practice in South Dakota there was twenty-six applicants, and all but two passed.

Dr. Charles Schoregge, of New Ulm, a recent graduate of Ann Arbor, is house physician at Asbury Hospital, Minneapolis.

Drs. Latimer and Hurley, of Gettysburg, S. D., are having a commodious residence building changed over for use as a hospital.

Dr. R. L. Murdy, of Aberdeen, S. D., and wife, made a trip to the Twin Cities and Rochester last month in their automobile.

The Central Alberta Medical Association of Canada will meet in Edmonton, Alberta, on August 14th, for a three days' session.

Dr. Hugh A. McMillan, who has been practicing for the past year in Helena, Mont., has decided to locate at Judith Gap, Mont.

Dr. G. F. Wareheim, a graduate of the New York Homeopathic College, has formed a partnership with Dr. R. G. De Puy, of Jamestown, N. D.

Dr. S. A. Keller, of Sioux Falls, S. D., has been doing post-graduate work for four months in eye, ear, nose and throat work in Eastern hospitals.

Dr. C. J. Ringnell, of Minneapolis, has gone to Europe for a tour of Norway and Sweden, and visits to the leading hospitals. He will return about September 20th.

The opposition in St. Paul to the location of hospitals near public parks or in residence districts has caused the projectors of a Lutheran hospital to seek a site in Minneapolis.

The North Dakota State Board of Medical Examiners held their last quarterly meeting at Fargo last month. Twenty-nine physicians received licenses to practice in that state.

At the annual meeting of the State Board of Medical Examiners of South Dakota, Dr. F. S. Howe, of Deadwood, was elected president, and Dr. L. S. Hill, of Watertown, was elected secretary.

Dr. James J. Reilly, of Langon, N. D., was convicted last month of murder in the second degree for causing the death of a woman upon whom he performed an abortion. He was sentenced to ten years in the penitentiary.

Our Western neighbor, the State of Washington, must have given a very severe examination to the candidates who sought licenses before the State Examining Board last month, for out of 85 physicians who took the examination only 53 passed. Five of the candidates were women, and four of them passed.

By an error in reading the report of the last meeting of the Wabasha County Society, we made Dr. Bayley secretary. Dr. W. F. Wilson was re-elected secretary, a position he has held

for a number of years, and, besides holding the position, he has performed the duties of a secretary and performed them efficiently. Very few of our medical societies seem able to find other than *figure-head* secretaries.

At the annual meeting of the Grand Forks District Medical Society of North Dakota, held at Grand Forks, July 12th, the following were elected officers for the current year: President, Dr. A. A. Westeen, of Grand Forks; vice-president, Dr. John Montgomery, of Ardock; secretary, Dr. Geo. M. Williamson, Grand Forks; treasurer, Dr. C. S. Marsden, Grand Forks; delegates, Drs. H. H. Healy, Grand Forks, and Dr. J. E. Countryman, Grafton. Dr. W. H. Witherstine read the only paper presented. It was on "The Treatment of Tetanus."

The "United Doctors" seem, at last, to find the unlicensed road a rocky one. Dr. J. E. Doran of the clan recently paid a fine of \$50 in Grand Forks, N. D.; Dr. J. C. Duckworth, also of the clan, escaped from the clutches of the law at Duluth upon agreement that he would leave the state; one of them recently escaped from Devils Lake, N. D., to return no more; and now we hear of one of them who is a licensed physician, yet practicing as a *United Doctor*, but, as is natural, under false pretenses. The last-named hails from Fairmount, N. D., but he advertised at Minot as coming from Aberdeen, S. D. *The Independent*, of Minot, notices the "United Doctor" editorially, and is not very gentle in its treatment of these great specialists.

PHYSICIANS LICENSED AT THE JUNE (1911) EXAMINATION TO PRACTICE IN MINNESOTA

UPON EXAMINATION

Anderson, Francis Wm....U. of Minn., 1911
Barron, Moses.....U. of Minn., 1911
Barrows, Roy E.Northwestern, 1909
Brady, Richard J.Jefferson, 1909
Craig, Robert Russell.....U. of Minn., 1911
Dailey, Wm. John.....Hamline, 1911
Fulton, Philip Randall.....U. of Minn., 1911
Geist, Geo. Arthur.....U. of Minn., 1911
Goodheart, Chas. Jos.Hamline, 1911
Hengstler, Wm. Howard.....U. of Minn., 1911
Kelly, Paul H.U. of Minn., 1911
Kremer, Walter J.U. of Minn., 1911

Laurent, Antoine A.Hamline, 1911
Laws, Carl Henry.....Hamline, 1907
Leitch, ArchibaldU. of Minn., 1911
Love, Geo. Robert.....Hamline, 1910
Melzer, Simon W.Northwestern, 1909
Olson, Chas. August.....U. of Minn., 1911
Papez, Jas. Wenceslas.....U. of Minn., 1911
Petersen, Thorvald.....P. & S., Chicago, 1911
Ruud, Magnus B.U. of Minn., 1911
Schumacher, Nicholas Wm.Hamline, 1911
Spear, Albert E.U. of Minn., 1911
Turnacliiff, Dale Devere.....U. of Minn., 1911
Wagner, Nicholas Bacon.....Rush, 1910
Wooster, Arthur Monroe.....Hamline, 1911
Ziskin, Thos.U. of Minn., 1911

BY RECIPROCITY

Boysen, PeterU. of Penn., 1905
Hayden, Clara May.....U. of Iowa, 1907
Hymmer, Glenn Orville.....Marquette, 1910
Kelly, John Vincent.....Marquette, 1911
Koller, Louis Robert..St. Louis University, 1910
Lloyd, Hiram J....Chicago Col. M. & S., 1911
Logan, Archibald Hodge.....U. of Penn, 1907
McDonald, Archibald Leete Johns Hopkins, 1905
McLaughlin, Harry J..P. & S., St. Louis, 1907
Oshana, AghasieRush, 1897
O'Connor, Daniel Chas.Creighton, 1910
Parker, Edward Stuart.....U. of Iowa, 1908
Rutherford, Willmar Clifford..Marquette, 1911
Warren, Clark Le Roy.....Rush, 1897
Webber, Edward E.Jefferson, 1902
Willcutt, Clarence E.U. of Iowa, 1909

PRACTICE FOR SALE

In North Dakota. A \$4,000 practice to the purchaser of my office furniture for \$300. For particulars address K. S., care of this office.

PHYSICIAN WANTED

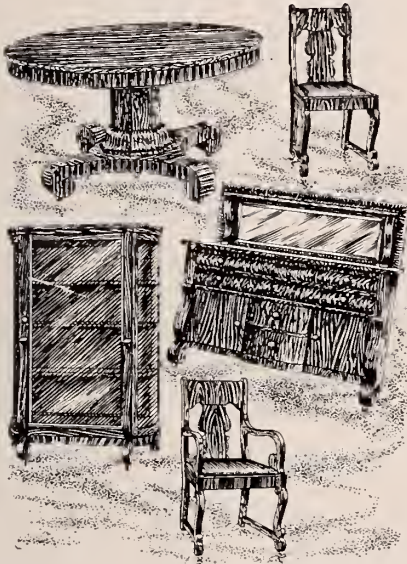
A competent physician is wanted to locate at Gaylord, Minn. For full particulars inquire of or write Dr. D. N. Jones, Gaylord, Minn.

PRACTICE FOR SALE

I will sell my practice, paying in cash between \$2,500 to \$3,000 a year, and office furniture for a reasonable cash price, if taken at once. Good location in an inland town of 300 population with large surrounding territory, 40 miles from Minneapolis. Rich German and Scandinavian community; only physician. The electric short line will reach here by fall. Address S. W., care of this office.

Your Credit Is Good at The New England!

But Two Weeks More of Fine Furniture At Half!



THERE was a time when the mere announcement of Furniture at Half Price would have startled the community, but folks have gotten used to seeing these announcements twice a year, and, on the quiet, some of our wisest housekeepers defer their purchases until these opportunities arrive.

ALTHOUGH the nature of these sales is pretty generally understood, we repeat that the goods offered are manufacturers' samples, hardly any two pieces alike. They are saved for us by the largest manufacturing concerns of the country in consideration of the generous purchases we make of them in the regular course of business.

WHEN we started these sales, over twenty years ago, a carload seemed a large quantity to handle; but it isn't a carload any longer; it's a trainload, or the equivalent of same if all the cars were bunched.

THERE isn't a single undesirable in the entire lot, nor a piece which needs the slightest apology. They are samples of the Spring season of 1911, and mirror the efforts of the most up-to-date artisans in wood, metal, leather and upholstered furniture.

ON each piece is a tag, on which appears the regular, standard price. You cut it in halves, and pay us cash, or utilize our equitable partial payment plan. It's all the same to us.

IN order to test the advertising value of "The Lancet," we will prepay freight two hundred miles on all purchases, whether regular or half price, made during the next two weeks.

New England Furniture & Carpet Co.

*Complete Furnishers of Homes, Offices,
Hotels, Clubs, Churches, Theatres
and Public Institutions*

5th St., 6th St. & 1st Ave. So., MINNEAPOLIS

PUBLISHER'S DEPARTMENT

A PROMISING AGENT IN HAY FEVER

Dr. J. E. Alberts, of The Hague, Holland, undoubtedly performed an important service when he directed the attention of the medical profession to his new combination for the treatment of vasomotor rhinitis. We refer to the combination now known as Anesthone Cream, which has heretofore been briefly noticed in these pages, and which contains one part of adrenalin chloride to twenty thousand (1:20,000), and 10 per cent of para-amido-ethyl-benzoate, and is marketed in the form of an ointment.

Applied to the mucous membrane of the nares, Anesthone Cream has a persistent anesthetic effect which affords marked relief in hay fever. As para-amido-ethyl-benzoate is only slightly soluble in aqueous fluids, its anesthetic action is prolonged. It does not have the poisonous effect of cocaine upon the protoplasmic element of cells, nor does it depress the heart. Furthermore, there is no tendency to "habit" acquirement.

The preparation came into considerable use during the hay-fever season of last year, the consensus of opinion being that it affords a very practical and satisfactory means of relief from symptoms due to hyperesthesia of the nasal mucous membrane, and without ill effects—an important consideration. The fact that the relief continues for several hours in some cases is worth remembering, in view of the fleeting effect of most local anesthetics.

Anesthone Cream is supplied in a collapsible tube with an elongated nozzle to facilitate its application to the nasal mucosa, a portion of the cream about the size of a pea being applied three or four times a day, as may be necessary. It is marketed by Parke, Davis & Co. Whether, as an agent in the treatment of hay fever, it will attain the vogue reached by some other preparations put out by the same company—notably Adrenalin Chloride Solution and Adrenalin Inhalant, which have been before the medical profession for a number of years and thus have the advantage which pertains to priority—remains to be seen. At any rate, it is worthy of a fair chance, which, of course, in the long run it is certain to get.

"AN OLD FAVORITE IN A NEW FORM"

The frequency with which we have to give iron, quinine, and strychnine, and the intense bitterness of the common liquid form of this combination, make any improvement of interest. After long experimentation, the Lilly laboratories have developed a formula, offered as Coco I. Q. & S., which is bitterless and palatable. It also contains from two to four times as much quinine as the ordinary elixir. Coco I. Q. & S. contains one grain of quinine sulphate to each average teaspoonful, 96 minims, whereas most elixirs represent but one-quarter grain of quinine to this volume. The quinine in Coco I. Q. & S. exists in the unchanged form of crystals suspended in a chocolate flavored, syrupy medium, which masks their bitterness, also that of the strychnine. In elixirs the quinine is in solution, supersaturation and consequent precipitation occurs when attempts are made to raise the quinine content.

Coco I. Q. & S. is not only stronger than the elixir, but is so palatable that a child will take it as readily as an adult. Furthermore, it is not known to the laity as elixirs are, and can be prescribed without the patient recognizing the treatment, which, in certain cases, is a decided advantage. A request addressed to Eli Lilly & Company, Indianapolis, will bring you a sample.

THE HUDSON SANATORIUM

Since the above institution was founded as the Oliver Wendell Holmes Sanatorium, the Twin Cities have been interested in its work, and have sent it many patients, and it has always thoroughly deserved the confidence and patronage of medical men. It was never more prosperous than under its present management.

Dr. W. H. Darling, the present medical director of the institution, has the qualifications obtained in general practice and in special work, the latter of which was done mainly as assistant superintendent at the St. Peter State Hospital. Executive ability, combined with such experience, is indispensable in the management of this important institution, and Dr. Darling has executive ability in a large degree. The Sanatorium is beautifully situated, occupies a fine building, and the grounds are quite unsurpassed for beauty.

Dr. Darling will be glad to correspond with physicians who may desire to send patients to his institution. A picture of the attractive surroundings of the Sanatorium appears in our advertising columns.

LAVORIS IN HAY FEVER

That satisfactory results may be derived from the use of Lavoris in cases of hay fever seems very logical, on account of the zinc chloride which is in permanent solution. Its astringent action relieves the congested condition. Its stimulating and healing action renders the mucous surfaces less susceptible to irritation.

Lavoris applied in a fine spray need not be diluted, but if used as a douche it should be diluted about one to four or five parts of water, preferably warm, adding a dash of salt to correct the specific gravity and increase osmosis. Also use this solution to bathe the eyes.

The Lavoris Chemical Co., Minneapolis, have repeatedly offered, through our advertising pages, to send, without cost, a liberal supply to any physician, and it would seem that the present is a particularly good time to accept their offer.

THE "CITY" ANEMIC

The hard humdrum city life, especially of those whose days are spent indoors, in offices, bending over desks, ledgers and school books, is almost certain, sooner or later, to leave its traces upon the man, woman or child thus unfortunately situated. General sluggishness of metabolism, due to indoor confinement in a vitiated atmosphere, and lack of exercise, is followed by failing appetite and later by degenerative blood changes of anemic nature. While Pepto-Mangan (Gude) cannot, of course, remedy the cause of the anemia and general devitalization, it almost always assists materially in overcoming the anemic blood state, increases appetite and acts as a real tonic and general reconstructive. As Pepto-Mangan (Gude) is free from irritant effect upon digestion, it is readily borne and quickly absorbed and assimilated, and as it is non-astringent it does not cause or increase constipation.

A SUCCESSFUL HOSPITAL.

It is always gratifying to be able to announce the success of either a new or old hospital, for success in this line means service rendered and appreciated.

The St. James Hospital and Sanitarium, St. James, Minn., under the management of Dr. W. H. Rowe, Jr., with an able surgical and medical staff, has been very successful, we are informed, and has rendered service to many patients who might not have been able to obtain such service under other conditions. The building of this hospital is one of the best and most commodious in Minnesota.

COLONIC FLUSHING

By T. D. Lyons, M. D., New York City.

The supplementary treatment of intestinal disorders of children by irrigation of the colon is a method of treatment long used and invariably successful if the proper technique is used and details carefully adhered to. These details include a properly medicated solution, a proper temperature and its introduction into the bowels by a suitable tube.

Since using Glyco-Thymoline I have continued with that medicament as I have found its use invariably followed with success. The temperature should be about 70° or 80° F. Ice cold solutions I do not approve of as, in feeble children, serious collapse has often followed their use. Where the case is more acute, temperature high and patient's vitality little impaired, cold solutions may not cause such serious symptoms, but the warmer solution of Glyco-Thymoline fluid will, I am assured, reduce the temperature sooner by removing the bacterial factors more effectually.

The child whose clothing must be removed, is placed on a table on which may be laid a quilt covered by a rubber sheet, the buttocks raised slightly and the body inclined and supported towards the right side. The receptacle for the solution, a glass irrigating outfit or fountain syringe, is suspended about three and a half feet above patient. A soft rubber catheter of the largest size is secured to the tubing of the irrigator. About seven and a half to eight inches from the catheter's distal end a cotton bandage whose edges are frayed is wound around till a diameter of three and a half inches is reached. This permits a firm pressure around the anal orifice and produces no discomfort to the child.

The catheter, well lubricated, is now carefully introduced and the Glyco-Thymoline solution permitted to flow in advance of the tube, thus inflating the bowel and permitting an easy introduction. As the fluid is passing onwards the contour of the bowel may be seen and a careful manipulation of abdomen will assist its advance. The amount necessary to fill the colon, as the ileo-cecal valve is the limit of irrigation, will be for a child of six to eight months from fourteen to sixteen ounces, a child of one and a half to two years, thirty to thirty-six ounces. The amount specified must be present in the bowel before the Glyco-Thymoline is permitted to run out. The flushing must be continued until three and a half quarts are used. If properly done more than one irrigation in twenty-four hours in acute cases, or two in the same period of time for chronic conditions will not be necessary.

THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, AUGUST 15, 1911

No. 16

CEREBROSPINAL SYPHILIS*

BY WILLIAM C. NICHOLS, A. B., M. D.

FARGO, N. D.

This study is based on a series of about thirty-five cases of cerebrospinal syphilis, a few of which I wish briefly to describe. The series includes a few cases of tabes and of general paresis, which we will refer to in the differential diagnosis, and a few on the border-line where question arose as to whether the process was an active syphilis or a parasyphilitic lesion.

Final diagnosis was ultimately based on the Wassermann reaction, in either the blood or the spinal fluid, or in both, for where we found the blood positive we undertook a series of lumbar punctures to determine whether the spinal fluid gave parallel reactions.

In old cases of hemorrhage or thrombosis we were often surprised by obtaining a positive Wassermann, and especially was this true in cases where the early onset of the focal symptoms raised the question of whether the vascular lesion was dependent on a specific basis.

The following histories of cases of various involvement are abstracted as briefly as possible.

CASE 1.—P. H., Irish laborer, 25 years of age. His trouble began sixteen months ago with headache, severe and intractable; three months later he suddenly began to vomit and vomited a great deal for a week regardless of food taken. During the period of vomiting his left arm and leg became weak, but never completely paralyzed. He lost the memory of what had happened previous to vomiting, and he still had some difficulty in recalling events in his past life. At the time paresis developed, he lost control of sphincters, but, with the exception of a little urinary urgency, that has all cleared up. He has had no visual disturbance. Speech has been disturbed since the attack started. He believes that this trouble is due to poor mem-

ory for words. He enters the hospital now believing that the trouble is growing worse again, as his head aches considerably and weakness is returning. He had chancre seven years ago, lasting for about a month. There is no history of secondaries.

Examination shows a well-nourished white man, rather slow in speech, with some difficulty in recalling words. He understands readily enough, although he gives the impression of a somewhat sluggish mentality.

The left pupil is slightly larger than the right; both react to light and accommodation. The right is somewhat irregular in outline. There are no signs of extrinsic paralysis. There is some weakness in flexion and extension of both the left arm and leg. The triceps and wrist are equal and active. Abdominal and cremaster, equal and active, knee-jerks are both exaggerated. Achilles are both active. No Babinski, nor clonus. Both the blood and spinal fluid gave positive Wassermann.

CASE 2.—G. B., Italian, waiter, twenty-four years of age.

Three months ago he first noticed pain in the head, which has gradually grown worse. It is described as a dull encircling pain, most severe over the left temple. Two and a half months ago he first noticed double vision in the left eye, but is not conscious of any trouble in the right eye. He vomited twice, a week ago, apparently without cause, but there has been no recurrence. He denies venereal infection.

Examination shows a man about twenty-four years of age, rather anemic in appearance, but fairly well nourished and developed. He lies quietly and seems to be comfortable.

Left eye: Ptosis complete of upper lid, and complete paralysis of extrinsic muscles. Pupil is widely dilated, ovoid in shape, and completely immobile. The ophthalmoscope shows a very red fundus, tortuous and poorly defined vessels, and a pale, swollen disk in which cupping is obliterated. Cannot distinguish light with this eye.

Right eye: Ptosis of upper lid and slight paresis of external rectus. Pupil regular and active to light and accommodation. Eye-grounds present much the

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

same appearance as in the left eye, but in much less marked degree. At entrance, vision was good in right, but after three days he could count only fingers. There were no other findings, and the case seemed to be one of a pure internal and external ophthalmoplegia with involvement of the optic nerves. Knee and Achilles jerks were absent, but there were no abnormal reflexes and no sensory disturbances.

CASE 3.—Chas. M., colored, laborer, thirty years of age.

Two months ago developed pain in the right hip, knee and ankle. Pain was constant, but variable in intensity, often being severe enough to keep him awake. Pain not aggravated by walking nor relieved by position of leg. Difficulty in walking, due to weakness and bending of leg, gradually developed. Two weeks ago started to have tingling sensations in thigh and leg. Weakness became marked; at first was confined to inability to move toes, then gradually ascended until now whole right thigh and leg are useless. Three weeks ago urination became difficult. At first there was only delay in starting the stream. Today it was necessary to be catheterized. Has had no headache, nor visual disturbance.

Six years ago had a chancre for which he was treated internally for a few weeks. A year ago had an attack similar in beginning to this one. He took medicine for several weeks, and no paralysis developed.

Examination: Well-nourished colored man. Seems to have considerable pain in back and bladder when moved. Pupils equal and active to light and accommodation. No nystagmus, nor extrinsic paralysis. Atrophy of right thigh is very noticeable. Flaccid paralysis is complete. There seems to be some rigidity of the spine in the lumbar region, and there is tenderness over the lumbar muscles. Testicular sensation is reduced on both sides. Triceps and wrist are both active. Knee and Achilles jerks are absent on the right. No abnormal reflexes found. Sensation seems to be hyperesthetic all over the body. Analgesia is found over inner surface of upper right thigh, right side of perineum, and right half of scrotum and penis. Below Poupart's on right there is a reduction. Sensation is in no place absent, and tactile sense is apparently not disturbed. No thermal changes are apparent. X-ray of lumbar vertebra negative. Wassermann positive. This man rapidly developed a decubitus, followed by a pneumonia, and died. Post-mortem showed a large gumma of the cauda equina.

CASE 4.—G. A., shoemaker, thirty-six years of age.

Three weeks ago, suddenly he had a convulsion, following which he was in a comatose condition for three days. Then he had three more convulsions in rapid succession, and with the last lost ability to swallow and to talk. He noticed at about the same time that right arm was partially paralyzed. He is emotional and cries easily. Seems to be able to understand what is said to him, but is unable to talk. Five months ago had a similar attack which was less severe.

Examination: Well-nourished white man, very emotional, cried several times while being examined, but has no pain. There is some paresis in right arm and hand. Right pupil is larger than the left. Both react sluggishly to light and accommodation. There is no apparent extrinsic paralysis. There is some right-sided facial paralysis of the lower branch. Tongue and

lips are tremulous. Tongue protruded without deviation. Triceps and wrist both active. Abdominal and cremasters active. Both knee-jerks active, but right is slightly exaggerated. Achilles both active. No Babinski nor ankle clonus. Wassermann reaction positive.

CASE 5.—J. W. S., German, bartender, forty-two years of age.

Nine months ago while walking along the street he had a sudden attack of dizziness without falling or losing consciousness, although he felt weak and was immediately unable to walk properly because the left foot turned in, and he could not control the left leg accurately. At the same time difficulty in the use of the left arm and hand developed. Condition has been about the same since except that the use of the left side has much improved. It is now a little weak, but he is able to use it all right. During the past nine months has had variable difficulty in speech. He says that he can remember the words all right, but that articulation is difficult. Urination has been precipitate all the time, but there has never been any involuntary urination nor retention. He admits history of chancre twenty years ago, but describes no secondaries.

Examination: He is a well-nourished, middle-aged man. He talks a little thickly, but seems to be intelligent and rational. There is no aphasia and no Romberg. Pupils equal; react to light somewhat sluggishly. There is no ocular palsy of any kind, and facial and tongue palsy is not present. The grip in left hand is weaker than in right, and there is some incoordination here. Left leg is dragged a little in walking, but paralysis is far from complete. All of the deep reflexes are quite active, and those on the left are exaggerated. Abdominal and cremasteric not obtained on the left. There is no Babinski, but there is a left-ankle clonus. No sensory disturbances found. Both blood and spinal fluid gave positive Wassermann.

This man had three-months hospital treatment when the trouble first started, and apparently was on specific treatment. He now enters because he believes that he is growing worse again.

A brief enumeration of the individual pathological lesions of cerebrospinal syphilis may not be out of place here. In the active forms, no matter where the nervous system is involved, there is always an initial inflammatory process, consisting of round-celled infiltration in the pia and about the blood-vessels. This is especially true of the base of the brain and the posterior part of the spinal cord. Endarteritis and permanent thickening of the meninges follow.

The paraprocesses, coming on years after infection, are not inflammatory, but consist in gradual degenerative changes attributed to toxic influence and occurring in structures having related functions, producing the so-called system diseases, such as tabes.

The processes with which we have to deal consist, in order of frequency of occurrence, of meningitis, vascular lesions, myelitis, gumma, and primary degeneration of the cranial nuclei.

The possibility of syphilis of the nervous system must always be excluded in cases showing gross lesions of the central nervous system unless a diagnosis can be made of another definite clinical entity.

No part of the nervous system is exempt from attack, but in nearly every case certain symptoms are present, recognition of which permits the proper diagnosis. Diagnosis of localization of pathology must be made first, and this opens up the whole subject of examination of the nervous system, which will be referred to in a later paragraph.

In cases presenting multiple lesions varying in intensity, in a combination which other disease does not simulate, diagnosis is easy, but in the incipient cases where early diagnosis is very important and difficult we, fortunately, have many characteristic features which determine the syphilitic origin.

The history or sign of previous syphilis is important. Old scars may be found; there may be a history of eruption or sore throat; or in a woman a story of consecutive miscarriages. Unless infection has been recent it is not worth while trying to find indurated glands, especially epitrochlear.

Many people will give a history of a chancre, which, they will insist, has been a soft one, not followed by any noted secondaries, but the neurologist, perhaps oftener than any other medical man, observes undoubted cases of syphilis following such a history.

Under certain circumstances, in the absence of a history or sign of previous syphilis, we are fully justified in making a definite diagnosis of nervous syphilis on a clinical basis.

Headache is one of the very frequent and early symptoms. It is characterized by its intractability, and the fact that it may exist for weeks or months before any other signs are present.

The pathology of cerebrospinal syphilis oftenest is not a clean-cut individual pathological picture, but it most frequently consists in diffuse involvement with various combinations of the individual lesions. Meningitis is most commonly the fundamental process associated with any one of or all of the other lesions.

The meningitis is usually basillar although it may be cortical. It is a gummatous meningitis originating in the subarachnoid tissue in the region of the chiasma between the peduncles, and extending irregularly but diffusely over the whole base. It is often widely extended, involving both brain and cord. The growth is characterized by

a gelatinous and fatty proliferation, which forces its way into fissures, proliferating and dying in rapid succession and repetition, thus accounting for the variability in the compression, and hence in the symptoms. More rarely, there is extension to the substance of the cord or brain, producing myelitis or encephalitis, symptoms of which appear suddenly.

Extension to the vessels from the basilar meningitis is very frequent and often accounts for part of the picture. As the arteries are chiefly affected on the side on which the basilar process is most advanced, the hemiplegia in this form is very apt to be on the opposite side to that on which the cranial nerves are paralyzed, and the laws for localization for crossed hemiplegia must be cautiously used in brain syphilis.

Such a multiple pathology gives symptoms which may be designated as multiple cerebrospinal syphilis. An endless variety of combination is possible, hence our findings may be as various. With the basal meningitis as the basis, we may have any combination grafted onto its symptoms which are the most constant, so the picture ordinarily will clearly indicate the presence of more than one foci.

The onset is usually gradual, but may be abrupt, especially where we have to do with an arteritis primarily. The patient first complains of some single symptom which has brought him to a doctor. It often at first will be a transient, variable disturbance, perhaps a transient diplopia, or a paresis of an extremity, or even a rapidly clearing hemiplegia. Until well established the process is characterized by its variability, but soon definite permanent findings occur, which indicate that the disease is distributed over a large part of the cerebrospinal axis with the process relatively not intense at any place.

As the earliest symptoms are frequently due to basal involvement, the cranial nerves are likely to show the first change. The oculomotor, the sixth, and the optic are usually the first involved because of their position. Hence early extrinsic paralysis, producing ptosis, strabismus, or diplopia, changes in the optic nerve producing disorder in vision, are very apt to occur early. Pupillary changes, either irregularity in outline, inequality, or rigidity may be present from injury to or pressure on some part of the oculomotor system. There is no disease which so constantly gives eye-findings, and they may occur, not only with the predominant process in the base, but often where the findings point to cord changes as the important feature.

Other cranial nerve lesions are less frequent, but any of them may occur. In syphilis the facial follows the ocular apparatus in frequency of involvement, and it may be either peripheral, nuclear, or supranuclear; however, it is usually a peripheral affair and is unilateral.

The fifth, eighth, and twelfth may be affected and show, respectively, abnormalities of sensation in the fifth, such as hyperesthesia or anesthesia or hypesthesia, nerve deafness, paralysis of a vocal cord, or paralysis and atrophy of the tongue. One of the above may occur alone, or there may be a combination. Usually, there is not consecutive involvement when several are affected, but the picture is suggestive of several foci of varying intensity.

Disturbance of function of bladder and rectum, the former more commonly, is very frequent in syphilitic involvement of the cord; hence, in the diffuse processes they are apt to be important symptoms.

Often a bladder disturbance may be one of the first things, and perhaps the only one, complained of. I have recently seen two cases of cord involvement in which bladder trouble was present and had so overshadowed the rest of the findings as to be subjected to prolonged urethral treatment by several men. The following history of one of them may be interesting.

Mr. O., 32 years of age.

Present history: He complains of trouble in urinating, difficulty in starting the flow and in emptying the bladder, and has a dribbling after he has finished. Feels a peculiar sensation in bladder as if it were paralyzed. This trouble first attracted his attention several months ago, but has gradually grown worse in spite of the fact that he has had considerable local treatment for strictures, which have been diagnosed as the cause of his trouble.

He has had an occasional sharp pain in thumb or shins, and when an extremity is a few moments in one position it seems to go to sleep. There is no difficulty in locomotion and no speech disturbance. There is a little trouble in writing because of weakness in hand. Sexual power is diminished. There is no visual nor mental disturbance.

Past history: Nine years ago had a chancre followed by secondaries for which he had mixed treatment by mouth, off and on, for about three years. Was a hard drinker up to about two years ago, but now goes on a spree of a couple of days' duration only about twice a year.

Examination: Pupils are equal, but both are somewhat irregular in outline. Reaction to both light and accommodation is sluggish, but there is no myosis. There are a lateral nystagmus and some slight failure in convergence. There is no facial paralysis, and speech and mentality are normal. Romberg is absent. Knee and ankle jerks are not obtained with re-enforcement. There are a few scattered areas of anesthesia over the

chest. Nothing can be demonstrated in the genito-urinary system. This man made a marked improvement after a few weeks of rather irregular mercurialization.

As the cord may be involved any place there are no focal symptoms impossible in a spinal syphilis. However, as the meninges usually bear the brunt of the process, especially is this true in the posterior part, the posterior roots are the most likely to suffer. Girdle sensation, pain in the distribution of the segments involved, variation in sensation, such as paresthesia, hyperesthesia, anesthesia, etc., may occur. The anterior or motor root involvement is revealed by a flaccid segmental paralysis and trophic and vasomotor change.

Examination of the reflexes frequently may throw light on diagnosis, and it may not be amiss to hastily run over their significance. The deep reflexes are of the most importance, but careful observation is necessary to elicit accurate information from them. The triceps and wrist present considerable variation in the healthy, but there should be no marked difference on the two sides. To obtain them relaxation of the muscles is necessary, and any position that will accomplish this purpose may be used. The tendon of the triceps is struck just above the olecranon. A tap over the lower end of the radius produces contraction of the brachioradialis and causes flexion and slight pronation of the forearm and hand.

Knee-jerks are obtained by the tap of the hammer on the patellar tendon. The muscles must be relaxed for proper results. Relaxation is difficult to obtain with some patients, and reflex may be inhibited. While the patient is lying in bed, one hand is placed beneath the knee, it is raised up a little, and the tendon is struck just below the patella. Or the patient may lie down with the legs hanging over the edge of the bed. Reinforcement is obtained by having him make muscular effort with the hands simultaneously with the stroke of the hammer. If care is taken to obtain relaxation differences in the knee-jerks are easily demonstrated, and any observable degree of variation from the normal noted. The Achilles jerks are nearly as important as the knee-jerks. An easy way to obtain them is to have the patient kneel in a chair with the feet hanging over and then strike the Achilles tendon a sharp blow. Where the reflex is present a plantar flexion occurs. When much exaggerated a very sharp response or clonus is obtained.

The reflexes are depended on to localize motor lesions. An exaggerated reflex or clonus and

spasticity indicate, under most circumstances, that the lesion is in the efferent system between the cortex and the anterior horns. Loss of reflex or flaccidity localizes lesion between the anterior horn cells and the muscle distribution. Associated symptoms will usually readily indicate the presence of the lesion in the peripheral nerve-trunks. It is needless to say that where there is a break in the afferent part of the arcs, such as is found in tabes, exception is had to this rule.

The superficial reflexes may be absent whenever the arc is broken. They are especially disturbed in unilateral cerebral disease. Abdominal and cremasteric reflexes are very frequently lost in association with hemiplegia of the same side.

Normally, when the sole of the foot is stroked there results plantar flexion of the great toe. A lesion anywhere in the pyramidal tract converts it into dorsal flexion or Babinski phenomena. This is often accompanied by spreading of the other toes. Oppenheim's sign, dorsal flexion obtained by stroking the medial surface of the tibia downward, has the same significance.

The most definite of the laboratory methods is the Wassermann reaction. While not infallible, it is often a great help in clearing up an obscure diagnosis. A test made with the blood is sufficient for all practical purpose. Some observers say that when present in the blood it will be present in the spinal fluid, and we so found it in the cases where we did both tests; however, Nonne cites a large series of cases to disprove that the reactions are parallel. Often where the Wassermann is found to be negative it may be well to repeat it in a week.

Cytological examination of the fluid obtained by lumbar puncture is of value. The fluid is usually clear and may exude under pressure. In the presence of syphilis of the nervous system there are a large number of lymphocytes present. This fact is also true in the parasyphilitic cases.

Lumbar puncture is made between the fourth and fifth lumbar vertebræ on a level with the crests of the ileum. The patient should be lying on his side on a perfectly level surface with the legs drawn up. The needle is inserted one-fourth of an inch from the median line, a little upward and inward, and is slowly passed into the canal. If it meets with obstruction it must be withdrawn a short way and be redirected. Ordinarily, lumbar puncture is perfectly safe, but in the presence of an intracerebral lesion, such as brain tumor, it is definitely contra-indicated, for the removal of some of the supporting fluid may

result in impaction of the brain-stem in the foramen, with sudden death.

The inherently protean character of nervous syphilis necessitates its differentiation from most of the diseases which present focal symptoms, however, it must suffice to give merely passing mention to a few of those most likely to cause confusion. We can conveniently group them in a class where the brain lesion is predominant and into another where the cord changes are the striking features.

In lesions showing the syndrome associated with cerebral hemorrhage and thrombosis the necessity of excluding syphilis, either as a cause of the vascular change, or as the active cause of the focal signs, is of supreme importance. Especially is this true in the young. If such symptoms occur in a young adult in the absence of a source plainly evident of embolus or thrombosis, the field of possibilities is rather closely confined to syphilis or brain tumor. The absence of definite diagnostic features of syphilis cannot always be taken as conclusive, and the Wassermann test should be made when in doubt.

Hemorrhage itself in a person below forty years of age is nearly always specific in origin.

Syphilitic hemiplegia is due ordinarily to arterial lesions presenting distinctive features consequent to the development of a progressive obliterating endarteritis. The course has been arbitrarily divided into three periods.

During the first we have a period of functional disturbance corresponding to invasion of the vessel. The patient complains of painful or other manifestations, having no direct relation to terminal symptoms. Here headache is a constant symptom. Blurred sight, diminished memory, depression, prostration, and drowsiness may occur.

In the second period where the vessel is partly obliterated we have an incomplete form of the terminal symptoms, more pronounced than in the first stage and directly due to ischemic troubles. Here we have sensory and motor disturbances, fugitive weakness, weak grasp, clumsy movements, etc.

The third period is the paralytic stage, produced by total obliteration of the vessel and consequent softening. The paralytic stage oftenest runs through the preceding two stages, but it may come on suddenly. Where gradual it is very likely to be consecutively progressive, becoming first complete in part of a limb, then in the whole limb, then in the face, and finally in the lower limb.

There is little danger of confusing a well-developed case of disseminated sclerosis with syphilis, for the intention-tremor, scanning speech, nystagmus, and primary change in the nerve-head, will distinguish the disseminated; however, careful and extended observation may be necessary to decide that a slowly developing multiple sclerosis is not syphilitic. All the aids in making direct diagnosis of syphilis must be brought to bear here. If the Wassermann is positive it is proper to institute specific treatment.

The other forms of general disseminated lesions, such as tuberculosis, carcinomatosis, etc., need only to be mentioned.

Brain tumor is often confused with syphilis in diagnosis, and the mistake is made both ways. Probably more brain tumors are considered syphilitic than *vice versa*. Mistake here is more serious than in most diseases, for brain tumor demands just as definite and just as important a treatment as does the syphilis. In such cases, after a short term of intensive mercurialization without result, decision should be made in favor of the tumor. For differential diagnosis between nervous syphilis and tumor, without history of syphilis, Wassermann is of extreme value and conclusive if negative. Where syphilitic history is present positive Wassermann is valueless.

Recalling the predominance of meningeal involvement in nervous syphilis, it is obvious that confusion may arise in the differentiation of other forms of meningitis. The syphilitic is ordinarily a chronic affair characterized by slow onset, variability with tendency to recover, and a minimum of pressure symptoms as compared with focal signs. Temperature usually is not present. It may, however, develop with a temperature and give the picture of an acute process. Where high temperature, high leucocytosis, and tempestuous onset do not eliminate syphilis, the Wassermann or a cytological examination of the fluid will determine.

Tubercular meningitis is more apt to cause confusion, for it is also slow in development and may have several weeks of prodromes. Laboratory methods may be necessary for differentiation.

Neurasthenia may enter the diagnosis in two ways: first, a patient having had syphilis may use the fact as the basis of much depression, which, with the associated headache, may simulate a nervous involvement; however, headache should never be considered neurasthenic until all other possibilities are exhausted, and there will be no organic changes, such as eye-findings. In cases

where paretic changes are present or where frontal lobes are involved, possibly neurasthenia may have to be excluded. Moral degeneration always excludes neurasthenia, and a neurasthenic's apparent lack of judgment is not so much an absence of the power to judge as it is a lack of power to form judgments for any length of time.

Hysteria may so closely simulate organic disease that extreme care is often necessary to eliminate it; however, where there is such definite evidence as ocular palsies or abnormal reflexes, the diagnosis of hysteria is not logical. In the palsies of hysteria, sensory phenomena are apt to be associated in such a way as to raise question of source. Hoover's test will often help to distinguish a functional hemiplegia. The hand placed beneath the leg detects involuntary downward pressure of a supposedly paralyzed limb when the patient attempts to raise the sound one against resistance.

After middle life arteriosclerosis is less often on a specific basis, but where it is it may be associated with symptoms amenable to specific treatment. In these cases if the history and findings do not in themselves justify active treatment a positive Wassermann will.

If a patient past middle life, in the absence of cardiac or renal disease, develops epilepsy, the suspicion is justly raised either of active syphilis or general paresis, or both. The presence of a positive Wassermann renders it likely that the epilepsy is due to a syphilogenous change, or is the precursor of an active syphilis.

When the syphilitic process is especially active in the cord, differential diagnosis must embrace several diseases that produce focal symptoms. When the process is specific it will rarely be confined exclusively to a single area of the cord, nor to the cord itself often. Careful search will reveal findings due to more than one lesion. The common occurrence of eye-findings without symptoms must be remembered. Where such diagnostic findings are absent laboratory methods should be resorted to when a clean-cut diagnosis can not be made.

Acute and chronic syphilitic myelitis must be distinguished from other forms of myelitis, although eighty per cent of myelitis is syphilitic in origin. Pathologically, the specific forms are usually examples of meningomyelitis, hence give root-symptoms in addition to the myelitic findings, which often simulate a total transverse lesion of the cord. Seventy-five per cent of the syphilitic are dorsal or dorsolumbar. The specific character is determined by the history of syphilis,

presence of premonitory symptoms over some time, absence of constitutional disturbance at the beginning, step-like character, incompleteness and oscillation of the individual phenomena, and the occurrence of findings which demonstrate that the process is not purely spinal.

Peripheral neuritis may often be very difficult to distinguish, although as a general thing it is less acute in onset. Ordinarily, the fact that weakness and pain are distributed in the course of the nerves and not segmentally, and that tenderness usually, but not always, is present over the nerves, presence of probable etiology and the rarity with which sphincters are involved will distinguish; however, specific cases in which epicomus or cauda are involved may closely resemble a severe neuritis and require laboratory methods for differentiation.

It is rare that a syphilitic process will confine itself so closely to the anterior horns as to simulate a poliomyelitis. Usually, enough evidence of diffuse pathology will be forthcoming to raise suspicion. Lumbar puncture or Wassermann will decide the question. The paraplegia of syphilis is most often spastic.

Combined cord-degeneration, in which symptoms resemble tabes, but where reflexes are increased, is usually attributable to a definite etiological factor, and in syphilis signs of ocular involvement will show diffuse process. Erb's syphilitic paralysis is most apt to simulate this. Starting as a myelitis subacutely, it develops ascending and descending degenerations which produce similar symptoms. Laboratory methods are often necessary for a decision.

The fact that active lesions may not only simulate the parasyphilitic forms, but may co-exist with them, makes it imperative to recognize their presence. In such combination we may have to do with any of the individual processes in association with the system pathology, and the symptoms and findings in addition to the tabetic or paretic will be focal, dependent on the pathological conditions. A paralysis early in association with unquestionable para findings usually will raise suspicion of an active process. In the pure para affairs the pupils are more commonly myotic and will not be immobile to accommodation as they are apt to be in the other. Difference in the reaction of the pupils and irregularity in outline both suggest activity.

Observers describe a pseudotabes syphilitica and a pseudoparesis syphilitica, and the German authorities (Nonne) maintain that it is only in these cases that treatment is beneficial. Some

American authorities, on the other hand, believe that there is always a question of the activity of the process and that all cases of tabes and general paresis should have the advantage of a course of intensive specific treatment. Whether or not the result in these cases depends on the fact that the process is an imperfecta and there is an apparent rather than a real cure, is open to argument.

Pseudotabes and paresis alcoholica are conclusively differentiated in the absence of the Wassermann and pleocytosis.

In summing up the features of a characteristic cerebrospinal syphilis we find that the striking thing is the multiplicity of lesions of the brain and cord, giving diffuse symptoms dependent on the pathological conditions present.

Indefiniteness and variability in symptomatology, nearly always suggestive of a diffuse process, the unusual and unexpected combination of focal signs, which can be attributed only to more than one lesion, and the peculiar constancy with which ocular findings occur,—all unite in forming a syndrome which, in its very indefiniteness, characterizes cerebrospinal syphilis.

The outcome of these cases depends directly on the pathological conditions present and the time in which proper treatment is instituted. It is needless to say that when nervous tissue is destroyed no amount of treatment will cause it to resume function; but when we remember that the initial symptoms are due to pressure or effusion or temporary interference with the blood-supply it is easily seen that treatment sufficient to limit the pathological process and permit absorption of the exudate may be followed by marvelous results. Atrophy and degeneration are not immediate results of compression, but require time for development.

The varieties most amenable to treatment are the meningeal affairs, especially in the early stages of round-celled infiltration. Next to them come the beginning vascular lesions. After vessels are obstructed and softening has occurred the most we can expect is a limitation of the spread of occlusion.

There is a question of whether proper treatment in early syphilis will entirely prevent future nervous involvement. It does apparently in the majority of cases, but in some it is of no avail. About 10 per cent of all syphilitics develop nervous lesions of one kind or another.

A large proportion of the cerebrospinal cases are probably directly dependent on the fact that improper treatment has been used when the disease was first acquired.

In the treatment of nervous syphilis neurologists rely chiefly on mercurials intensively used. Bichloride is given deeply into the muscles, from 1-10 to 1-4 grain, hypodermically, every other day. In the use of a large amount of mercury in this way I have never seen an abscess result except where improperly given. If injection is used subcutaneous abscess is very apt to occur. Inunction in dram doses daily if properly used will accomplish the same result. Unless pressure is marked the potassium iodide is not started for several days, and then it is given in doses of ten grains three times daily and is increased from one to five grains daily until a maximum of forty

grains, t. i. d., is being taken. If possible it is better to give a thorough course of mercury before starting the iodide.

Where intracerebral growth can be safely eliminated, pressure may be relieved temporarily by lumbar puncture and the withdrawal of the excess fluid. Puncture is of greatest value where the process is diffusely meningeal. Fibrous syphiloma is peculiarly resistant to treatment, and when localized, if causing pressure, it demands palliative decompression or removal, especially where choked disk is progressing.

FOR DISCUSSION SEE PAGE 387

SYPHILIS, WITH REFERENCE TO RECENT ADVANCES IN DIAGNOSIS AND TREATMENT*

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ST. PAUL

The present status of our knowledge of syphilis, other than its clinical aspects, may be said to be a product of the twentieth century. Two lines of investigation are directly responsible for the advance in syphilology. These two activities in research,—the study of animal parasitology and the problem of immunity,—led to the discovery, on the one hand, by Schaudinn, in 1905, of the *spirochæta pallida*, more properly *treponema pallidum*, and, on the other hand, in 1906, by Wassermann, of the reaction which bears his name. Schaudinn made his discovery while investigating the claims of Jacob Siegel for his *cytorrhyses lues*, and Wassermann by adopting Bordet's discovery of the deviation of the complement for his purpose. In addition to the above, due credit must be given Metchnikoff and Roux, who successfully inoculated apes and monkeys with the disease, in 1903, and to those following them who have produced the disease in laboratory animals. Following these advances in our knowledge of the nature, etiology, and diagnosis of the disease, came the use of the organic arsenic preparations in treatment, which was stimulated anew by the use of arsenious acid in trypanosomiasis by Leveran, in 1903; the use of atoxyl in the same diseases by Thomas and others; and its extensions to syphilotherapy by Neisser at Uhlenhuth's suggestion, in 1907. The use of various other organic arsenic preparations followed, and experiments with them culminated in the announce-

ment of Ehrlich, in 1909, of his preparation "606," chemically *dioxydiamino-arsenobenzol dihydrochloride*, generally called *arsenobenzol*, and commercially known as *salvarsan*. Salvarsan is the end-product of Ehrlich's studies on his own particular gift to medicine, chemotherapy, a therapy based on the biologic study of the animal cell.

From our present knowledge, then, we may definitely define syphilis, without fear of contradiction, I think, as an eruptive treponemosis, inherited or acquired, characterized by an initial lesion of infection followed by an acute generalized eruption and by the possibility during the whole life of the individual of new lesions in accord with the persistence of the virus in the organism. In the inherited form the initial lesion is absent.

It will be seen from the above that our knowledge of syphilis has been greatly added to during the last few years, and that the newer studies have proven much in the laboratory that was suspected or known before from clinical observation.

Clinical observation, then, is of vast importance to us, as practitioners, who are more interested in the welfare of our patients than in academic knowledge; and therefore clinical methods will never be superseded by laboratory findings to the extent one might be led to believe. We shall use laboratory methods only to confirm and aid us in diagnosis, in prognosis, and in the treatment of our patients. I shall not enter into

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

the theory or technic of the Wassermann reaction nor of the theory of chemotherapy, but shall try to state the bearing of the results of these on our clinical findings and their value to us and to our patients in relation to diagnosis, treatment, and prognosis.

Our patients come to us in various aspects of the disease, including latent and parasyphilitic cases. In all forms of the disease we can often make a diagnosis by the exercise of our unaided senses backed by the accumulated clinical knowledge of the disease and the patient's history as brought out by us both from the patient and other sources. Clinical observation is sufficient in the large majority of cases, the laboratory often being confirmatory or not of our observations. The two prominent laboratory methods of diagnosis are, of course, the demonstration of the *treponema pallidum* and the presence of the Wassermann reaction.

The value of these vary in different stages of the disease; that is, the probability of finding the *treponema* decreases with the progress of the disease, and the percentage of a positive Wassermann reaction varies with the progress of the disease also, and both are influenced by treatment. The finding of the *treponema*, however, is absolutely diagnostic, as is a positive Wassermann reaction; but the *treponema* must not be confused with other spiral organisms. With regard to the Wassermann reaction: It is specific in the sense and within the limitations that apply to all immunity reactions. It is a group reaction and depends upon the liberation of lipoids in the organism attached. This occurs, with exceptions to be noted later, only in that group of diseases produced by similar protozoal parasites, as in trypanosomiasis, spirochetosis, malaria, and yaws, but we have other less technical methods of differentiating these diseases, both clinically and in the laboratory. The reaction may occur in malaria during, and a short time after, the febrile paroxysm, that is, while the parasite is in the blood. A transitory reaction sometimes occurs in scarlatina; therefore Wassermann advises that the reaction be not taken within three months following a malarial paroxysm and not for a month following an acute febrile disease. Tubercular leprosy, not the anesthetic form, also gives the reaction. It is said pellagrins give a positive reaction, but some observers deny the truth of this last assertion. If one holds, then, to these preliminary precautions and employs the proper technic, it can be said with certainty that the investigated case is syphilitic if a positive reaction is obtained. On the other

hand, if the reaction is negative, syphilis cannot be excluded absolutely, but only with a probability of about 90 per cent. I must add, in addition, that in primary syphilis the Wassermann reaction is almost invariably negative until the chancre is a fortnight old, and in only about 75 per cent is the reaction positive during the third and fourth weeks of the chancre. After this the reaction is positive in almost, if not in fully, 100 per cent of untreated cases.

It is in the primary stage of syphilis that our patients are most anxious to know whether the disease is syphilis or not, and it is here that we find that our diagnosis can be easily confirmed by the finding of the *treponema pallidum*, and the Wassermann reaction is of least diagnostic value. I wish to emphasize this point because the *treponema* can be found in over 80 per cent of chancres if carefully searched for, and its finding has been of immense value to me in several cases where the patient has presented himself early in the primary stage.

There are various methods of finding the parasite, including staining, the dark-ground reflector, and the india-ink methods. Whatever method is used one must be absolutely familiar with its application. Personally, I always make stained preparations, whether I employ the other methods or not, because I then have permanent evidence at hand to prove my diagnosis. As early treatment has a large effect on prognosis, early diagnosis is exceedingly important. I would warn you, however, that mercurials applied to a chancre, or vigorous treatment, either by mercury or salvarsan, lessens the chances of finding the parasite. The *treponema* may be found also in the enlarged glands, mucous patches, syphilides, and condylomata, but with greater success in the early stages of these lesions than later. Its demonstration in late lesions is exceedingly difficult, and here, aside from clinical findings, the diagnostic value of this procedure must give way in application to the Wassermann reaction. Of other means of diagnosis by laboratory methods that known as the Justus test was announced some sixteen years ago. It is based on the fact that there is a decrease of 10 to 20 per cent in the hemoglobin of the blood after the administration of mercury. It is not a pathognomonic reaction, but is said to be present in 70 to 80 per cent of cases showing active lesions of the disease. Neither is it valid in primary cases, and, furthermore, the reaction occurs only if mercury is exhibited by inunction or hypodermically. The test shows us at least the feebleness of mercurial medication by mouth,

as compared with the inunction or subcutaneous method of administration.

During the last few years much work has been done on the examination of the spinal fluid in the diagnosis of lesions of the nervous system, especially in the examination for increase of the globulin-content and the large percentage of lymphocytes in a total leucocyte count. Neither of these tests compares with the finding of the treponema or the Wassermann reaction in diagnosis, but in this class of cases the demonstration of the parasite is next to impossible. An increase in the globulin and the number of lymphocytes is said to be strong presumptive evidence of syphilis, or of parasyphilis of the nervous system, if acute and tuberculous meningitis can be eliminated. The tests, however, are said not to occur in tabes as often as in general paralysis. Positive tests rule out brain tumor, cerebral arteriosclerosis, and the various psychoses. A laboratory method of differentiating tuberculous skin lesions from tubercular syphilides, other than the tuberculin tests, and one within the reach of any practitioner, seems to appear with the recent method of demonstrating tubercle bacilli by means of dissolving bits of the suspected tissue in antiformin and then searching for the bacilli.

Treatment in syphilis in the past, as at present, has been mercury, with iodine as an adjuvant. Arsenic, iron, antimony, quinine, gold, and various vegetable drugs have been used, either for specific or tonic affects. Antimony has largely gone out of fashion, and the glitter of gold apparently added much to its virtue. Modern pharmacology and synthetic chemistry have furnished us with arsenic salts rich in arsenic with a minimum organotrophic effect and a maximum parasitotropic action. Antimony salts constructed after a similar manner are now being experimented with, and good results are to be looked for. Our journals have been filled with articles relating to salvarsan; in fact, everyone who has given one or more doses of it has related his experience in print. I have used salvarsan a number of times, have read all I could about it, and have noted its effect, both on my own and on other patients. Its effect, clinically, in many cases has been no more than that of judicious and well-directed mercurial treatment. It does, however, clear up mucous lesions more rapidly than mercury. In one case of malignant secondary syphilis it had but a temporary effect, and the patient is now clearing up under injections of salicylate of mercury. In another tertiary case with large ulcerating gummata of the skin, the kind that usually does very well under mercury and iodides, but

which had resisted both for months, it had no effect whatever. Other cases of secondary syphilis apparently cleared up more rapidly perhaps than with mercurial treatment, and in others no effect could be noted because the lesions had been removed by previous mercurial treatment. In one case of inherited syphilis with interstitial keratitis, which had resisted mercury and iodine treatment, there was considerable improvement both in the appearance of the cornea and in sight.

I have not mentioned the effect of salvarsan on the Wassermann reaction because, in my cases, I do not consider that a sufficient time has elapsed to note whether the drug has had a curative effect or not. One must not forget that the Wassermann reaction becomes negative after a thorough course of mercurial injections, as well as after salvarsan. Aside from the reports of others I must conclude from my own experience that salvarsan is a most valuable addition to syphilotherapy, but by no means an absolute cure. I shall continue to use it cautiously, but only in conjunction with mercurial treatment. It is interesting, in connection with the advent of the organic arsenic preparations, to look up the literature of specific therapy following the introduction of iodine by Mayo of Dublin in 1832. One writer of that time (William's *Elements of Medicine*, Vol. II, p. 165; Vol. I. 1836, Vol. II. 1841) says "Iodine of potassium must be considered as infinitely superior to mercury in the cure of this once formidable disease." This is a statement not dissimilar to those of the present day regarding salvarsan, but iodine, however, was soon relegated to its true place in specific therapy. Salvarsan is not the only arsenic preparation with vaunted curative effects in syphilis. Hectine seems the latest and is made in France, but its introducers have been more cautious in their claims than the Germans. It is used in doses of 0.2 gram repeated daily. At present cacodylate of soda, which contains 46 per cent of arsenic and may be given in doses of four grains, is being tentatively used in this country. The other organic arsenic compounds seem to be in total eclipse at present, though excellent results were claimed for them when introduced, although death, blindness, and severe toxic effects followed the use of many of them.

In addition to the large number of organic arsenic preparations, combinations of arsenic and mercury, such as atoxilate of mercury and hec-targyre, have been placed on the market. I know of no reason why these bastard preparations should be used when we have the separate salts.

It has long been known that mercurial treat-

ment applied to a syphilitic nursing mother affects the child through the milk, and that mercurial treatment given a pregnant syphilitic mother prevents, to a large extent, the death of the fetus and premature delivery. The same applies to salvarsan, but arsenic cannot be found in the milk, hence antibodies must be responsible for the result. It would seem that the following experiment proves that salvarsan liberates antibodies. A syphilitic was treated by salvarsan and another syphilitic was treated by injections of serum obtained from the first patient with seemingly equally satisfactory results in both cases. Now, these last statements and the fact that the treponema rapidly disappear from lesions in patients treated with salvarsan or mercury, and also that the Wassermann reaction becomes weakened and ultimately negative under either treatment, seem to prove that the Wassermann reaction has as great a value in prognosis as in diagnosis; at least, its presence or absence must be of more weight in prognosis than any clinical evidence we have at our command. The Wassermann reaction has also shown us, as has long been clinically contended, that the administration by mouth is a most ineffective method of giving mercury, for the reaction disappears much more rapidly after the administration by inunction and the hypodermic method; and, furthermore, it has shown that the insoluble salts administered intramuscularly is the most efficacious method of mercurial medication. From a laboratory point of view, then, taking into consideration all our present knowledge of syphilis, we must conclude that salvarsan is much more rapid in curative effect than mercury, in the majority of cases. Let us use salvarsan, then, in suitable cases, but let us follow Ehrlich's directions, both for its use and its contra-indications, if we would protect ourselves; and, furthermore, as the cure of our patients is our object, let us use it in combination with mercurial treatment by the most approved method and not consider our patients cured until all clinical signs have permanently disappeared and repeated negative Wassermann reactions can be obtained, the first being at least three months after the discontinuance of all treatment.

It will be some years before we can make a categorical statement as to the relative merits of the salts of mercury and arsenic in the treatment of syphilis.

Salvarsan is but one of the organic arsenical preparations, and no doubt new preparations will appear on the market, with an ease of administration and a lack of pain on the part of the recipi-

ent that will be no mean arguments favoring their employment. For my part I am willing to profit by the experience and experiments of others, but I am not willing to trust wholly to enthusiastic statements as to the permanent curative effects of one or two doses of salvarsan which later experience has shown were unwittingly tinged with the hope that springs eternal in the human breast.

DISCUSSION OF THE TWO PRECEDING PAPERS

DR. EDWARD STARR JUDD (Rochester, Minn.): I have been very much interested in these valuable papers, and believe that they should not be passed over without some discussion.

What Dr. Armstrong has said about the use of salvarsan is very important. From what we see and hear we might be led to believe that one dose will cure in every case of syphilis. Dr. Nichols' idea of continuing the treatment with potassium iodide and mercury, mercury alone, or with salvarsan, is also important. I made a list of cases with the results we have obtained with the use of salvarsan. We have given 61 doses of salvarsan, 52 intravenously and 9 subcutaneously. About 60 per cent of the patients improved immediately. The first injections were given only nine months ago, so we cannot report any cures. We have thus far seen the most marked improvement in cases of syphilitic lesions of the nose and throat. In a number of patients there was no sign of a lesion a short time following the injection, yet one of the patients had had a large ulcer on one tonsil. We treated two cases of general paresis with salvarsan, and both cases gave a positive Wassermann. One patient was benefited, or thought he was benefited, but in a month he was so much worse with general paresis that he could not come back for treatment. Another case of general paresis showed the result of treatment in a manner we have not heretofore observed, i.e., atrophy of the optic nerve following the injection of the salvarsan. We have treated several cases of tabes which have done very well, temporarily at least. One patient in a spastic condition was walking on crutches, and ten days after treatment he was able to walk with a cane. Another man with diabetic paresis claimed to be wonderfully benefited by the injection of salvarsan, but he returned a month later much worse than he had been before.

I mention these cases simply to illustrate how really very little we know as yet about the treatment. We have had no mortality, but that one case of optic neuritis should indicate a careful consideration of cases in which to use the treatment. Forty-five out of 59 cases (90 per cent) gave a positive Wassermann reaction.

DR. E. N. LAYTON (Sarles): I should like to say a word by way of discussing Dr. Nichols' paper. The doctor emphasized strongly the point in regard to the variability and multiplicity of the lesions in cerebrospinal syphilis, and those who have had opportunity to see many clinical cases will appreciate the importance of this emphasis. I believe there is no neurological lesion in which there is a greater variability or a wider range of multiplicity of symptoms than in cerebrospinal syphilis.

He also spoke of the variability of the reflexes. One knee-jerk may be enormously exaggerated, while the other may be reduced or may be entirely absent. A point I wish to emphasize is the importance of taking the Achilles jerk. We find that both cerebrospinal syphilis and tabes show changes in the Achilles reaction much earlier than in the knee-jerk. I am sure Dr. Nichols will bear me out in that.

The relation and character of the different lesions of cerebrospinal lues have been brought out clearly by the author. There are always several foci involved. As to the ocular findings: You will find an almost constant rigidity and an almost constant variability of the pupil. One author has made the statement that a rigid and immobile pupil has the same importance in cerebrospinal syphilis as the Argyll-Robertson pupil has in tabes.

Another point I wish to emphasize particularly is the advantage of treatment in the active stage of cerebrospinal syphilis. When you get sclerosis in any part of the cerebrospinal system the treatment aimed to dissolve or remove the conditions that exist in the active acute stage, is not going to be of any value. Treatment does cure cerebrospinal syphilis; it does not cure sclerosis.

I want to commend the authors for urging that all functional disturbances, such as neurasthenia and hysteria, be left out of consideration until all organic lesions have been considered. We are too prone to set down minor complaints to neurasthenia or hysteria when, if we would make a more careful study, we should find organic lesions.

DR. W. A. JONES (Minneapolis): I want to congratulate both of the doctors on presenting these papers. Dr. Armstrong brought out the necessary point of the study of syphilis in general,—a careful and thorough investigation of the individual, his history, and all possible points bearing upon the syphilitic lesion. This is an age of doubt and suspicion. A great many people who come into physicians' offices are under suspicion of having syphilis, and my practice is to give them the benefit of the specific doubt and treat them on that basis. It is said of most neurologists that when they fail to find a remedy in a nervous disease they give antisyphilitic treatment, and they very often prove the existence of syphilitic lesion.

I was interested in Dr. Nichols' papers because he went over the ground so carefully. He brought out a great many neurological points which should be carefully studied. The more I see of nervous syphilis the more I see the existence of lesions in no definitely localizable areas in the nervous system. I think authorities agree that the most common condition is (1) in the thickened membrane, (2) a disease of the blood-vessels, (3) gumma, and (4) the periosteal node. I think that is the common and generally accepted manifestation of syphilis affecting, directly or indirectly, the nervous system.

The treatment of the syphilitic depends upon the individual and his history; it depends too on the usual method of procedure. It seems to me that many of these cases may be benefited, first or last. They should be carefully looked into for a period of one or two weeks; they should be given a period of one or two weeks of rest and observation; and then the line of treatment can be suggested and followed. Therefore

it does not do in all cases to inflict them with mercurial or arsenical treatment. It is necessary, first of all, to put them in condition where they can be taken care of without drugs. The result is that by the careful exclusion of other causes and the study of the nervous system during the rest period the observations will be found extremely helpful. Then, by the injection of mercury or the newer remedies of salvarsan or cocho-dilate of soda, we get better results than we suspect. In a good many cases that seem hopeless the symptoms can be relieved by antisyphilitic treatment. It is only the old cases of long standing, where arterial occlusion has taken place, that might be given up from the start. I do not believe that when syphilis has invaded an artery and has accomplished its occlusion anything can be done with salvarsan or any other remedy. The use of salvarsan is sweeping over the country like a whirlwind, and while we are reaping advantages, we are reaping a good many disadvantages in an unexpected way from that remedy. I have given it so far only a few times and only in old cases, and it is too early to report results. The last time I gave it was yesterday, and I have not heard whether the patient has recovered. I fear not, because he had twenty-eight convulsions in twenty-six hours.

In the treatment of syphilis the medical man is amazed at the number of people that come in from the country suffering with syphilis. They have lived on the farm for years, and yet they come in with symptoms of brain tumor, meningitis, or arterial disease, but the real disease is nervous syphilis. I recently treated a farmer's wife who insisted that she never had contact with a person who had the disease, but she cleared up under antisyphilitic treatment. Her exposure was unfortunate perhaps, and shows how little you can rely upon the statements of some people. I think we are all under suspicion, and no man's word can be taken when syphilis is suspected. I had a man come in who had cardinal symptoms of brain tumor. He claimed he had never been anywhere except on his farm,—claimed he had never been exposed,—yet he promptly cleared up under antisyphilitic treatment. I believe the physician in the country should be a little more exacting in his investigations, and I think very often he would accomplish more brilliant results by inaugurating antisyphilitic treatment, even in some of his religious cases. (Laughter.)

DR. G. J. GISLASON: I was very much interested in Dr. Judd's reference to optic neuritis in one of his cases following an injection of salvarsan.

In Vienna, where they are experimenting extensively with this remedy, while they attach a great deal of importance to it they confine its use to the public wards and clinics, and do not, so far, feel justified in using it for their private patients.

Between the clinics of Dimmer and Fuchs there exists quite a difference in opinion as to the effect on the eye after the use of this remedy. In the Dimmer clinic they condemn the use of salvarsan on account of the optic neuritis which they claim it causes. They say that optic nerve-affections are proportionately much more common in syphilitics that have been injected with salvarsan than among those who have been treated by the old method. In the clinic of Fuchs they do not agree with this finding and think that the proportion of syphilitics presenting optic neuritis

is just about the same with the new treatment as it was with the old. One peculiar thing, although it may not have a great significance, is, that in all or nearly all the Dimmer clinic cases only one eye was affected. So far as I remember, they have not had a case of this kind where optic neuritis developed in both eyes. I would like to ask Dr. Judd whether in his case one or both eyes were affected.

DR. JUDD: It was a bilateral case of paresis.

DR. GISLASON: I might add that in these clinics they seem quite generally to have come to the conclusion that salvarsan is of very little use in cases of long standing, and the earlier the injection is made the greater the hope of results. In the venereal clinics there, they like to see the case as soon as there is a suspicion of infection, and from that time keep the patient under constant observation, examining him repeatedly for lesions or abrasions of the mucous membrane or skin, the secretion from which they examine bacteriologically, and in this way find the spirochæta before there are any other recognizable signs or symptoms of syphilis. If the spirochæta is found, they recommend that a large dose of salvarsan be immediately injected, hoping in this way to destroy the disease-producing poison while it is still circulating in the blood and before it has permanently lodged in the different tissues of the body. In addition to this, they start the patient on the old-time mercurial treatment. In this way the most optimistic hope to limit the disease to a period of four months perhaps, instead of four years.

DR. H. A. BEAUDOUX (St. Paul): I wish to take the liberty of saying a few words upon this subject. In regard to Dr. Judd's statement as to optic neuritis, and also concerning what Dr. Jones said about doubtful history: I have been interested with men in St. Paul in examining their cases after "606" had been administered, and it is well known, as the last speaker intimated, that it is best to examine the eyes before administering the drug. I think the best cases in which to give it are those cases which show nervous symptoms undoubtedly due to the invasion of spirochæta. I have not had a regret in regard to the administration of this drug. I have not had any bad results whatever. I rejected seven or eight cases principally on account of the fear of a dangerous optic neuritis following the injection of salvarsan. In other cases, in doubtful cases, where we were not able to establish diagnosis, we did not use it.

DR. ARMSTRONG (Essayist): I wish to extend my sincere thanks to the North Dakota Society for the privilege of addressing you.

I was very much interested in Dr. Nichols' paper. I do not see many cases of parasyphilis though I see some of the true cerebrospinal syphilis in the early stages of the disease.

I wish to emphasize the point of early diagnosis of syphilis for the reason that prognosis depends upon early diagnosis and early treatment. As I stated, the Wassermann reaction occurs in only about 75 per cent. of cases in the second or third week of the chancre. I have a patient who came to me Saturday (April 29th) with a chancre of the inferior turbinate of the nose, which is a very unusual site. I made smears and

demonstrated the treponema. The Wassermann reaction was taken yesterday (May 1st) and was positive. I was anxious to prove to myself that the treponema could be found before a positive Wassermann reaction could be obtained. Although this was not true in this instance, early treatment is indicated in all such cases, whether the Wassermann reaction is present or not.

Treatment begun early is most efficacious. If a syphilitic does not receive adequate treatment in the first year of the disease it is doubtful whether a cure can be effected. As to the methods of administering salvarsan: I do not think a definite conclusion has been yet reached and I shall not speak as to that. As to untoward results of its administration: I have had patients who complained of a great deal of pain from the subcutaneous injections. One man complained a great deal and there was considerable infiltration and redness for some weeks over the seat of the injection. In another instance, a boy with keratitis, where mercury and iodides had been tried and found wanting, an asthmatic attack occurred during the injection of the salvarsan. I viewed this with some alarm, but found that he was subject to asthmatic attacks. Some improvement in sight seemed to be apparent in this patient. In another patient, not mine, however, the pulse went down to forty-two and remained at that rate for two days following the injection. Salvarsan may often influence lesions which are refractory to mercury. In such patients it may be that the treponema are mercury-fast. Baly in England has shown by means of the Wassermann reaction that the insoluble mercurial treatment given intramuscularly is very efficacious, much more so than other forms of mercurial treatment. The percentage of patients showing a negative or a diminution in intensity of the Wassermann reaction after three months of injection treatment is larger than the same in patients treated by the internal administration for a year.

DR. NICHOLS (Essayist): I very much appreciate the additional points brought out in the discussion.

I would like to say a few words on the treatment in these cases with relation to the use of mercury. Bichloride is used hypodermically in the muscles in doses from 1-10 up to $\frac{1}{4}$ of a grain every other day.

In the case reported where the effects were so closely limited to the eyes, the patient was perfectly blind in the left eye, and after he had been in the hospital three days he could count fingers only with the right. He was started with $\frac{1}{4}$ gr. of bichloride given intramuscularly, and had no iodides at all until he had had several days of mercury. He made a marvelous recovery. His right eye cleared up completely, and when he insisted on leaving the hospital he could count fingers with the left eye.

In regard to the use of iodides: I think that it is almost the unanimous opinion among neurologists that the iodide or mixed treatment is of much less value than formerly considered. Most of them favor the use of mercury in large doses, and delay the use of iodides until the mercury has been well started or finished.

Fibrous gummata causing pressure present the same indications for surgical treatment as brain tumor. There have been many successfully removed, and the specific treatment has been continued afterward.

THE JOURNAL OF THE MINNESOTA STATE MEDICAL
PRESENT STATUS OF SERUM-THERAPY*

By DR. P. R. BURKLAND, M. D.

VERMILION, S. D.

Knowledge concerning sera and their use therapeutically is at present comparatively meager, though more or less study has been given this subject for the past twenty years. This science has been constantly developing, and new facts have been brought to light from time to time. It is not surprising that there should be a diversity of opinion among medical men on this subject, for it is a well-known fact that until a truth is definitely established there is of necessity much controversy among those seeking it. And the fact that there are differences of opinion on this subject may be taken as evidence that no one has learned the whole truth; however, every person who pretends to be interested in the various branches of medical science should seek to know, as far as may be, the facts and theories of this particular field. It is, for instance, inexcusable that any medical man should at this day disbelieve in the efficacy of antidiphtheritic serum, and yet we all know that there still exist a few skeptics. Of course, it has not been possible for the general practitioner to follow in detail the mass of literature setting forth the results of investigations, experiments, and theories along this line; but we should not fail to follow, in a general way, the advance of this department of medical research which promises much to the human race.

In general, we may say that immune sera are used to produce passive immunity in the individual to whom they are administered. Active immunity is produced in the individual by the administration of vaccines. A knowledge of immunity is requisite to the knowledge of serum therapy.

While the object of this paper is to present the therapeutic use of immune sera, it is appropriate to present a general consideration of immune sera. These are obtained from animals actively immunized to a high degree. It has been found that serum from a naturally immune animal cannot be used to produce passive immunity successfully in another. Immune sera are either antitoxic or antibacterial, or both. The antitoxic sera contain antibodies or immune bodies which simply unite with the free-toxin molecules and have no effect upon the bacterial

cells which develop the toxin. The antibacterial sera contain antibodies, which either destroy the bacterial cell by lysis or change it in some way so that the phagocytes can take it up more readily. If we accept Ehrlich's theory of immunity the antibodies in the antitoxic serum would correspond to the receptors of the 1st degree. Antibacterial serum would contain receptors of the 2nd degree, that is to say, agglutinines, preceptins, bacteriotropins, and also those of the 3rd degree, the so-called amboceptors or so-called lysins or cytolytic bodies. Before the receptors of the 3rd degree can do their work a labile or complement must be present. This complement we find present in both normal and immune sera, and to it has been given the name of *alexin*.

Immune sera become inactive upon aging, heating above 60 or 70 degrees centigrade, and upon addition of acids. When once the alexins have been lost by aging they can, in most cases, be replaced by the addition of fresh normal serum. Unfortunately, in a diseased individual the alexins are diminished, and if an aged immune serum is used in the treatment the results are not as good as would be obtained from a fresh serum possessing alexins in large quantities. According to the opsonic theory of immunity, the opsonins are the important factors in the production of the immune condition and correspond probably to the receptors of the 2nd degree. According to Ehrlich's theory at least, no antitoxic or lytic action has been ascribed to them; their efficiency being due to their powers to change the bacteria so that they are more readily taken up by the phagocytes. It would seem that, in explanation of immune sera, the acceptance of Ehrlich's theory would be the most plausible. Nevertheless, the opsonic theory has amplified our knowledge and given us a better understanding of the receptors of the 2nd degree.

The chemistry of immunity is very complicated, and we have much to learn as to why some sera are successful and others are a failure. It must be admitted that we have been sadly disappointed in our hopes along the line of serum-therapy. Diphtheritic antitoxin has been the bright and shining light which has beckoned to us, and spurred us on, and encouraged us in the belief that all germ diseases could

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

be treated by a similar specific. As a matter of fact, we have only a few sera which can be considered even moderately successful, therapeutically, although attempts have been made to produce immune sera against all the pathogenic microorganisms.

As worthy of some practical consideration from a therapeutic viewpoint only the following need be mentioned:

1. Antidiphtheritic sera.
2. Antitetanic sera.
3. Antimeningococcic sera.
4. Antistreptococcic sera.
5. Antidysenteric sera.
6. Antigonococcic sera.
7. Antipneumococcic sera.
8. Antityphoid sera.
9. Antistaphylococcic sera.

The various antivenene sera have been more or less successful. Some great claims have been made for cytolytic sera in tumors, but authentic information is very meager concerning these. As has been said before, all sera which we would use therapeutically must be fresh, for we need a good supply of alexins, since the individual we are treating will not have the normal number present in his blood because in disease they are diminished.

Before taking up each serum in detail, it will be well to mention the ill effects of sera in general. The nature and causes of so-called serum disease has been a matter of much discussion and speculation. The symptoms of the reaction appear from eight to ten days after the first injection of the serum and consist of erythema and edema, fever, enlarged and tender glands near the site of injection, and joint pains. These symptoms may occur sooner and are much more serious and violent, though of shorter duration, following sensitization by first injection. If injections follow each other frequently no more ill effects are suffered from the repeated injections than would result from a single injection, but if they follow at intervals of more than ten days and less than six months violent reaction may possibly follow. This is important knowledge to the one who would use the various sera in the practical treatment of disease. Sera containing many cellular elements or much protoids are more apt to produce the reaction than those containing less. Purified and concentrated sera are less apt to cause the symptoms. The reaction is supposed to be similar to anaphylaxis in the guinea-pig, though anaphylactin has not been found in the human being.

Diphtheritic antitoxin was discovered by Ferran, in 1890, and later in the same year by Frankel and Behring. It was first placed on the market in 1894. Since that time advances have been made in the preparation of the market product. Also the indications for its use have been more clearly understood, together with a better knowledge of reasons for failure. In the beginning it met with very serious opposition, and its value came to be known very slowly. Fatal results were invariably laid at the door of the serum instead of being blamed upon the destructive action of the toxin. We may safely say, taking all cases into consideration, that this antitoxin has reduced the mortality in diphtheria from about fifty per cent to ten per cent. The quality of the serum has been improved by the removal of all substances possible, except those which hold the antibodies; also it has been concentrated, and the ill effects of its administration now have been reduced. It is now known that the antibodies are held by the globulins, and other forms of protoids are chemically precipitated and thrown out.

The deleterious effects following the administration of this serum may be enumerated as follows:

1. Sudden death in asthmatic attacks.
2. Erythema.
3. Enlarged glands near the site of injection.
4. Joint pains.
5. Fever.

The rash and fever which have followed its use have been mistaken in some cases for scarlatina.

All market preparations of diphtheritic antitoxin are obtained from a horse that has been highly immunized. It has been standardized, and is measured by units. The government fixes the standard in this country. A unit of the antitoxin, as you all know, is the amount of antitoxin required to neutralize 100 times the smallest dose of diphtheritic toxin required to produce death in a 250-gram guinea-pig in three or four days. Ideas concerning the indications for the use of antitoxin have varied somewhat in the past, and we still have a variety of opinions, but if we look at it from the scientific standpoint they stand out clearly enough. The antitoxin is used principally as a curative specific, but may also be used as a prophylactic treatment.

As a curative measure it should be used in every case of diphtheria, early or late, but the

best results cannot be obtained unless the administration is early, for, after the toxin has united with the tissue-cells, the immune bodies or receptors are unable to reach the particular toxic molecules which have already entered into chemical combination to the destruction of the cells which they have seized, and frequently the neutralization of the free toxin is not sufficient to save the organism as a whole. If antitoxin is administered on the first or second day we get practically 100 per cent cures. The longer the wait the less the percentage of cures; therefore it is important to make an early diagnosis, which, unfortunately, is often a very difficult matter and frequently requires the laboratory method. It would be more scientific to make a correct diagnosis and then administer the antitoxin, than to administer it promiscuously in every slightly suspicious case, as has been done, and as is being done at the present time, by many even among those that have the facilities at hand for the use of laboratory methods. While it is true that a dose of antitoxin on suspicion is not in itself harmful, yet, supposing a few weeks later a true case of diphtheria should develop in the same individual, then the use of antitoxin might be the cause of serious serum disease. It must be stated, however, that with the improvement in the preparation of the antitoxin, that is, the elimination of as much protoid as possible and still retaining the antibodies, the danger of serum disease has been much reduced, and the serum may be much more frequently and carelessly administered than formerly. Repeated doses of the antitoxin may be given at liberty if given frequently, that is, less than ten days apart, without more ill effects than would result from a single injection.

Antidiphtheritic serum is obtainable on the market in syringes of from 1,000 to 10,000 units in quantity, and the dosage varies considerably with the severity of the symptoms and the time of diagnosis. As much as 100,000 units are given in some cases. In general, it may be said that laryngeal cases should have comparatively large doses. The usual method of administration is by injection under the skin, but it may also be administered as a local spray, and some attempts with slight success have been made to administer the serum by mouth. If the latter method be used the stomach should be empty, and with the antitoxin should be given opium, chloroform, and salol in sufficient quantities to inhibit digestion. Dried serum has been produced which can be dissolved in salt solution

when needed. It has the advantage of lasting longer than the liquid form, but it has not come into very general use.

As to the prophylactic use of this serum, quite a change in opinion is taking place. Formerly it was thought proper to immunize indiscriminately and without regard to frequency, but a better knowledge of serum disease has caused this practice to be very materially diminished and has demanded more positive indications. Physicians and nurses who may, above all others, be expected to come in contact with diphtheria at any time were formerly thought to be the very ones who should receive prophylactic doses of the serum whenever exposed, but, in order to avoid the consequences of serum disease, it is better to use every precaution against acquiring the disease other than the use of the serum, because when exposed if nurses were to use prophylactic doses, then, two or three months afterwards, they should be exposed to diphtheria again and by this time the immune bodies should have been eliminated from the system, they would be worse off than they were in the first place for the reason that they had been sensitized to this serum, and ill results might follow the re-injection of the antitoxin at this time used as a curative measure if they should be so unfortunate as to contract the disease.

Some physicians inject prophylactic doses in the well members of a family where one has the disease, and for this practice there is some foundation, especially its use with children. In the past some institutions for children injected the antitoxin into every newcomer child as a routine procedure. There is no excuse for such a policy, and unless a child is known to have come from diphtheritic surroundings it is better not to use it.

In antitetanic serum we have another distinctly antitoxic serum which has given good results. However, we do not see such brilliant action as in antidiphtheritic serum. This is due to the difference in the action of the toxin. The incubation period of this disease is a long one, and the effects of the toxin are not manifested until the injury to the tissues is already irreparable. The tissues affected are mainly the central nervous system and the end-organs of the motor nerves, the end-organs of the motor nerves being reached through the axis-cylinders. We cannot expect much benefit from the serum after the symptoms have appeared, for just as in diphtheria we cannot undo the evil effects after the toxin has united with the tissues. For this rea-

son it was long thought that the serum was a comparative failure; nevertheless, it is a brilliant success if used early, that is, while the toxins are still free in the body, so that the receptors can unite with them. In order to be early in the administration, it is necessary to give the serum immediately and repeatedly in all cases of injury where tetanus infection may be expected to occur. By doing this the mortality has been cut down very materially.

This serum was discovered by Behring and also by Kitasato in 1890. Six years later it was placed on the market and can now be obtained in syringes of 1,500 to 5,000 units. It is obtained from the horse by much the same method used in the preparation of antidiphtheritic serum. The standard strength of this serum differs in various countries, but in the United States a unit is the amount of antitoxin required to protect a 350-gram guinea-pig against 1,000 times the smallest fatal dose of tetanic toxin for a period of ninety-six hours. The dosage in severe cases, when the symptoms have already developed, may be as high as 15,000 or 20,000 units every few hours. Much smaller doses can be given as a prophylactic,—1,000 to 5,000. Dried antitoxin has been used, but we have very little authentic information concerning the same. It may be used as a dusting powder in wounds or it may be injected after dissolving in salt solution. It dissolves very slowly and unsatisfactorily, however, and for this reason will probably not be used very extensively.

In antimeningococcic serum we seem to have discovered a serum of real value. This serum has only recently been put on the market, but has been quite extensively used and with an apparent diminution of mortality to the extent of 30 to 50 per cent. However, the virulency of this disease varies so much that it is difficult to say in any case what would have been the result without the use of the serum. This serum was produced for practical use mainly through the efforts of Flexner and Jobling, and we now have it on the market in syringes of 15 c. c. size. It is also obtained from the horse, and an attempt has been made to standardize the serum on the basis of opsonic strength. Antimeningococcic serum contains receptors of the 1st, 2nd, and 3rd degrees, that is to say, it is antitoxic, agglutininic and precipitating, or bacteriotropic or opsonifying, and, lastly, bacteriolytic. It may be considered a specific for the treatment of cerebrospinal meningitis, which is produced by the diplococcus intracellularis of Weichselbaum. The

method of administration is important. First a spinal puncture is made and the cerebrospinal fluid is permitted to run out, which is then replaced by the serum. The earlier it is administered the better the results. Amounts as high as 45 c. c. can be administered at one dose in severe cases.

Antistreptococcic serum belongs to the class of antibacterial serums. It was first produced by Marmorek, in 1895. It contains receptors of the 2d degree, agglutins, bacteriotropins, or opsonins. It has no antitoxic value, but the bacteriotropins or opsonins contained in it act upon the streptococci, making them more easily taken up by the leucocytes. The value of this serum is somewhat indefinite. Many good results have been reported and many failures. One great difficulty in getting a successful serum lies in the fact that there are many strains of streptococci, and if you do not have a serum produced by the particular strain which you are trying to combat in disease, your results are very poor. To overcome this difficulty the various strains have been used to immunize the horse, thus producing a polyvalent serum, and most of the market sera are of this type. There is no standard of strength, but it is put up in 10 c. c. syringes for injection.

Antipneumococcic serum can be bought on the market in 10 c. c. or 20 c. c. syringes. This is obtained from the horse immunized by injection of pneumococci. It has no antitoxic power, but depends for its value on bacteriotropins or opsonins. It is pretty well established that it contains no lysins. The therapeutic value of this serum is very doubtful, and reports have varied. In desperate cases perhaps a trial should be made, although we must not forget that to get the best results it must be given early. It is given in comparatively large doses, 20 c. c. being injected into the subcutaneous tissue every few hours until the symptoms abate.

Antidysenteric serum was first brought into use soon after Shiga discovered the etiological micro-organism, the bacillus dysenteriae of Shiga, in 1892. Reports from Japan show very good results from the use of the Shiga serum, but in this country very little success has followed its use. Unfortunately, there are several strains of the bacillus, some of which produce an extracellular toxin and others do not. In this country the cause of dysentery is the bacillus of the Shiga type which does not produce an extracellular toxin. In producing the serum for the market, at least in this country, various strains

of bacilli are used, thus producing polyvalent serum. Perhaps the reason for the poor results following the use of this serum in this country may be ascribed to the lateness with which the disease is recognized. The symptoms are often interpreted as those of an ordinary simple diarrhea until the disease has progressed to a dangerous extent. If the diagnosis were made earlier perhaps the results would be better. This serum can be obtained on the market in 10 c. c. syringes, and the dosage should vary according to the severity of the disease. As high as 100 c. c. have been injected in one day.

In antigonococcic serum we seem to have a serum containing only lysins as immune bodies. It has no antitoxic properties and no opsonins, but destroys the gonococcus by lysis. Torrey was responsible for bringing forth this serum, and the Torrey & Rogers serum is the accepted one. Actively immunized rams are the animals from which this serum is obtained, various strains of

living and dead gonococci being used to actively immunize the animal. This serum has been employed with some success in the various complications of gonorrhea, but is of no value in the urethral type, vaginitis type, or in conjunctivitis. The method of administration is the injection of the serum in the subcutaneous tissues, and the dosage is 2 c. c. every two or four days. It must be stated that serum disease is more apt to occur following the use of this serum than any other, and since the treatment is usually a long one it is important to inject at intervals of not more than ten days.

Antityphoid and antistaphylococcic sera are more disappointing than those mentioned above.

It would be impossible to go into detail with all the sera which have been produced and tried. It has been my purpose to give a general knowledge of the subject, together with more detailed information concerning the more promising sera.

BOOK NOTICES

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathaniel Bowditch Potter, M. D., Assistant Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1229 pages, containing 472 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$6.50 net; half morocco, \$8.00 net.

Ever since Sahli's work on Diagnosis appeared it has enjoyed a popularity quite unrivaled by other books of its class. In the six years that have intervened since the appearance of the first English edition, many new ideas have been introduced in diagnostic work and the present edition is as complete and as up-to-date as it can possibly be made.

The book contains more than its predecessor, and by the use of different type and a closer arrangement, an increase of subject-matter, even greater than the actual increase in the number of pages would indicate, has been made.

The former edition is so well known as to render detailed notice scarcely necessary other than to some of the subjects newly introduced.

The chapter on hemodynamics has been entirely rewritten, and much new matter added;

and several new sections have been added to the chapter on percussion, auscultation, and palpation. In abdominal palpation the importance of the Trendelenburg position is insisted upon.

The section on the examination of the stomach and stomach-contents is much enlarged, and an unusual amount of attention has been given to the subject of test-meals.

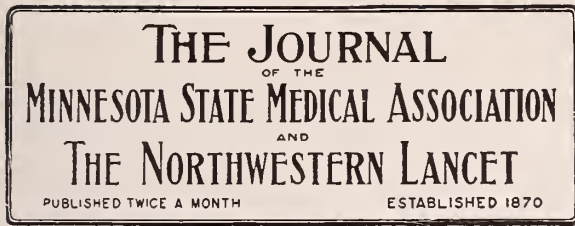
A new section on the demonstration of the most important poisons in the gastric contents is added. Under intestinal parasites the new species described in literature have been included.

The chapter on blood-examination covers 123 pages, and is an unusually thorough exposition of the subject and includes all the new methods of value.

The section on exploratory puncture has been much enlarged, and the cytology of the puncture-fluids is fully discussed.

Under the nervous system many changes have been made, including a careful revision of the subject on aphasia. Marie's views on aphasia are given and are criticised adversely. Localization in the brain is aided by the addition of a series of cuts showing the latest physiologic conceptions.

Though the author states that the major portion of the contents of the book is derived from his own experience, the whole field of diagnostic procedure is covered with extraordinary thoroughness, and it seems marvelous that any one man out of his own personal experience could have written so well on so many different topics.



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Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

AUGUST 15, 1911

DIPHThERITIC PARALYSIS

Dr. A. Spingarn in the *Long Island Medical Journal* for May gives a very clear and convincing explanation of the pathology of diphtheritic paralysis. In most instances the lesion is in the central nervous system and bears a striking resemblance to the bulbar paralysis and pontine and encephalitic types of poliomyelitis.

It is not uncommon to hear that deaths from diphtheria are due to heart-failure resulting from myocarditis, but from a careful analysis of the symptoms it is reasonable to suppose that the medulla oblongata is the seat of infection and destructive lesions. The case cited by Spingarn points out the occurrence of paralysis of the soft palate nineteen days after the onset of diphtheria, transitory difficulty of breathing eight days later, apparently due to transitory paralysis of the diaphragm or intercostals, and then in three days the onset of grave disturbance of respiratory innervation, and of failure of the heart's action. The association of the two last symptoms is more than a mere coincidence and shows the probable involvement of the nucleus of the pneumogastric nerve. This pathologic change Spingarn believes is secondary to the fundamental change in the medulla. Not infrequently a practically complete paralysis of the trunk and extremities occurs without much

respiratory disorder, other than that due to the insult in the medulla below the origin of the pneumogastric. Fortunately, most of these cases recover with but little muscular reduction, but the recovery is slow, as in other infections involving multiple nerve-trunks. The diagnosis between diphtheritic paralysis and epidemic paralysis of the polio type is based on the occurrence of diphtheria and the absence of the usual febrile symptoms that precede the polio paralysis. Occasionally, perhaps frequently, the diphtheria is unrecognized, or no effort is made to establish its presence by culture methods. In view of the large number of epidemics of paralysis that have prevailed all over the country the presence or absence of diphtheria is established by the majority of observers before a conclusion is reached.

Laboratory methods are so accessible that there is hardly any one who does not avail himself of this diagnostic aid.

Hence the establishment of diphtheritic paralysis *versus* epidemic paralysis is not difficult. The latter form of paralysis is usually accompanied by lasting and conspicuous symptoms unless the infection is exceedingly mild.

THE HON. JOHN D. WORKS

The Senator from California is sending out reprints from the *Congressional Record* of his speech delivered July 6, 1911.

The Hon. John D. is a Christian Scientist, and he does not care who knows it.

He details at great length his illness and his association with regulars, homeopaths (and quite likely, irregulars), and finally with Christian Scientists. When he took up the latter form of treatment immediately his symptoms began to improve, due entirely to Christian Science. He was so thoroughly pleased with himself and his alleged recovery that he induced his invalid wife to follow in his footsteps, and, being dutiful, she complied and was cured. His son, who had the drink habit, was also cured by the same method. Evidently the whole Works family were neurotics, and what they needed was something new to get them out of a rut. They got it, and the country got the benefit of their experiences through the bulky *Record*.

The Hon. John D. went further in his speech. He became a warm champion for the League for Medical Freedom. He outlined this great organization and its efforts, and gave a list of

its prominent members. He defended it from the exposé in Collier's.

He denounced the American Medical Association as a "doctors' trust," as all good antis do. He read telegrams from various people who are hoping and praying for medical freedom. In these telegrams the name of B. O. Flower was much in evidence, although his former presidency of a patent medicine concern was not mentioned. Osteopaths, opticians and anti-everything medical are using all of their wind power to promote the League for Freedom. The Hon. John D. quotes from a personal letter from H. E. Lesan,—whoever he is,—that "There are now a little over 200,000 members of the National League for Medical Freedom, and I should say that from one-third to one-half of them are Christian Scientists." * * * "There are 10,000 physicians of all schools, being probably more osteopaths than any others; next to that eclectics, then homeopaths, and then chiropractics, with a very good sprinkling (140) allopathic physicians, who belong to the League as a protest against the political methods of the American Medical Association."

This quotation explains the attitude and make-up of the antis.

The Hon. John D. extended his speech over 48 pages of the *Record* using the same old arguments that are commonly employed. The same old cry of fear that a National Department of Health would put all other healing methods out of business.

Senator Owen, the author of the bill under discussion, asked some very pointed questions of the Hon. John D., but received evasive, incoherent, and unintelligent replies.

The Hon. John D. was so afraid that his favorite healing cult would be eliminated that he referred to it almost as frequently as he did to the League for Medical Freedom.

In the discussion he showed such ignorance of other countries and their methods of protecting the public health, as well as the methods of states in his own country, that his arguments dissolved into an advertisement for Christian Scientists and the League for Medical Freedomers.

The speech of the Hon. John D. should be read by all who like that sort of reading, as they will find that it is the kind of reading they like. Both sides will enjoy it—from their own viewpoint.

If the Hon. John D. will talk again it is quite probable that a National Department of Health

will be established, with thanks to the Hon. John D.

MRS. SEWALL REPLIES

Mrs. May Wright Sewall, at the suggestion of the National League for Medical Freedom, was urged to reply to an editorial in the issue of June 15th of *THE JOURNAL-LANCET*.

It is cheerfully published, as it serves to emphasize the comments made by the editor. The same lack of argument prevails in the letter as was expounded (?) by the lecturer. The same effort to mislead the people is evident, and the same misrepresentations that are common to those who are ignorant, wittingly or unwittingly, are apparent. The difference between religious freedom and medical freedom is so great that they cannot be discussed under the same heading.

The people can and will think as they please for all time, and there can be no restriction to freedom of thought and particularly in religion, but to cast broadly and freely misrepresentations concerning the protection of the health of the people is outrageous and disorganizing. For economic and social reasons, the improvement and advancement of public-health measures, must go on, and the efforts of the so-called objectors to the establishment of a National Department of Health do not spell freedom—they spell restriction for all classes. The Owen bill has been modified to meet the objections of all forms of healing, and Senator Owen distinctly states that "the bill was drawn deliberately and intentionally to prevent any discrimination against Christian Science, osteopathy, or any other school of medicine or of healing."

Mrs. Sewall would better read the bill more carefully.

REPORTS OF SOCIETIES

RED RIVER VALLEY SOCIETY

The Society held its regular meeting at Warren on July 25th. Twenty members and several visitors from other societies were present.

A luncheon was served at noon and the program was taken up at 2 o'clock. The program was as follows: Address, Dr. J. W. Robertson, of Litchfield, President of the State Association; "Gastroptosis," Dr. T. W. Stum, St. Paul; "Infantile Paralysis," Dr. Emil Geist, Minneapolis.

The papers were very thoroughly discussed by the members. Drs. Nippert, of Minneapolis, and Taylor, of Minot, were out-of-town visitors who took an active part in the discussion of the several papers.

Five new names were added to the roster of the Society.

J. F. NORMAN, M. D., Secy.

ABERDEEN (S. D.) DISTRICT SOCIETY

The midsummer meeting of the Society was held at Enemy Swim Lake, near Webster, July 25th.

Papers were read by Dr. C. S. O'Toole, of Vienna; Dr. J. C. Litzenberg, of Minneapolis; Dr. W. A. Kriesel, of Watertown; Dr. H. M. Freeburg, of Watertown; and Dr. T. N. Kjerland, of Webster. About forty doctors were present.

R. D. ALWAY, M. D., Secretary.

CORRESPONDENCE

THE LEAGUE FOR MEDICAL FREEDOM: A CORRECTION

TO THE EDITOR:

Certain that your sense of honor will incline you to publish some words of defense in reply to an editorial appearing in your issue of June 15th, bearing my name as its title, I venture to submit the following with the hope that it may correct in the minds of your readers some misleading impressions conveyed by the article in question.

I enter no protest against the charge of dullness. One could hardly do that without proving the justice of the accusation.

My interest in the public health is of no recent birth. Born of an invalid mother, I was reared by the united devotion of both my parents to an admiration of vigor and a desire to achieve seldom inculcated in girls of even this happy generation. Constant out-door exercise, freedom from fettering clothing, confidence in the recuperative power of Nature, and an aversion to medicine of any kind by whatever school administered, were fundamental principles in my tuition.

Perhaps it is due to this that when the Girls' Classical School of Indianapolis was founded thirty-one years ago the assistant first sought was one who could properly direct the vigorous

work in the gymnasium which constituted the first chapter in the school's curriculum.

It is therefore not surprising that, many years prior to the "twelve years ago" ascribed in your article to "my first speech" in Indianapolis on public health, I had addressed many meetings on that subject, had issued many circular letters, not only to the patrons of the girls' Classical School, but also to the physicians of Indianapolis, and had written a Health Catechism.

Increasing years, with the results of such widening observation and enriching experience as are the natural fruits of time, and the possible fruit of time only, have increased my interest in this subject, fundamental to human progress and to human happiness.

Therefore it was not with a "different set of ideas" that I visited the Twin Cities in June. The fact, evaded in your article, is that the same ideas, increased and deepened, are called into a new field of activity, through the large amount of restrictive medical legislation passed, introduced, or threatened in the legislatures in many states, as well as in our National Congress, in recent years.

Medicine, in spite of all the discoveries and improvements which it has experienced, remains perhaps as theoretical as any field of human activity, and to my mind to attempt to restrict its practice to any one class or school of physicians constitutes an invasion of personal liberty as much more repugnant to American thought than would be the restriction of the conduct of religious services to one school of theological thought as is the sense of the physical life in most human beings more lively than the consciousness of spiritual powers.

No one can value more highly than I do the services rendered to humanity, to science, and to progress by devoted students and practitioners of the art of healing.

My contention is, that every citizen must be free to choose the practitioner whose services he desires. It is an indisputable fact that hundreds of thousands of people now living in the enjoyment of good health have been brought to their present happy state through the agency of the homeopathist, the magnetic healer, the osteopathist, the Christian Scientist, or the new-thought healer, after having been abandoned as "incurable" by the so-called "regular" physicians. It is no doubt also true that the nominal "regulars" have been the means of restoring to health patients with whom physicians of the

other schools have signally failed. So long as uncertainty sits on the banners of every school of practice, let us have no legislation which discriminates among these schools. Let us by every means make accessible to all people pure air, pure water, pure food and awaken in all an ambition for health. Then when health fails as under such conditions with all that they imply it seldom will fail, let us no more restrict the people's choice of a healer than we would their choice of a grocer or a chauffeur. Holding all people in all professions and businesses to the highest standards of preparation and attainment and making laws in the interests of the people to protect them against the malpractice of grocer or doctor alike, let us retain in the American heart the love of personal liberty, and inculcate its practice in respect to the matters most personal and most vital.

In your article no more serious error occurs than what I must believe is an unintentional one; namely, that of misrepresenting the character of the members of the National League for Medical Freedom. The impression is left that those opposing state medicine and restrictive medical legislation are the enemies of the public health. In my opinion there are in the United States today no group of people more intelligently or more profoundly interested in the public health than are the over 200,000 members of the National League for Medical Freedom. Within this League are many physicians of the "regular" school who are in perfect harmony with dissenters of all kinds and (who are also within this League) in opposing the establishment of compulsory medication and all forms of medical legislation which would restrict the freedom of a sufferer in his choice of a helper. As all dissenters in religions are united against the establishment by law of a state church, so all dissenters in medicine are a unit in opposing all legislation that implies a state medicine.

In conclusion I must regret that you saw fit to disparage my audience in Minneapolis because it was composed chiefly of women. In what audience convened in behalf of the public welfare do not women in the United States predominate? And who should be interested in medical freedom if not women, who as the fountains of national life and the rearers of the Nation's citizens will be either thwarted or aided in the performance of their great duties by their own standards of health and by their own medical advisers?

As women were once the victims of an enthroned priestcraft, but in modern times have become the chief supporters and trusted aids of an enlightened and conscientious ministry, they have more recently been and in large numbers still remain the victims of a blind faith in certain definite schools of medical practice. From this form of servitude women are also being freed and are, through the agency of the National League and of other organizations formed in defense of the public health, being schooled to become the intelligent aids and judges of intelligent and conscientious physicians.

MAY WRIGHT SEWALL.

Meadowlyd Cottage, Eliot, York Co., Maine,
July 8, 1911.

NEWS ITEMS

Dr. P. H. Mee has moved from Gaylord to Osseo.

Dr. A. A. Giroux has moved from Duluth to Crookston.

Dr. W. R. Hand has moved from Wendell to Elbow Lake.

Dr. B. A. Melgaard has moved from Volin, S. D., to Lawton, Iowa.

Dr. Guy O. Stone has moved from Minot, N. D., to Glasgow, Montana.

Dr. Stanley E. Kerrick, of Minneapolis, is doing special work in Europe.

Dr. B. A. Kamp, of Alden, has been doing post-graduate work in Chicago.

Dr. D. H. Jones, of Gaylord, is in Europe on an extended trip for pleasure and study.

Dr. Barclay's hospital building at Cloquet has been enlarged and much improved throughout.

Dr. H. L. Knight, of Minneapolis, was married last month to Miss Myrtle Wells, of Austin.

Dr. John Jackola, of Duluth, has been missing for several weeks, and it is feared that he is not alive.

Dr. E. W. Buckley, of St. Paul, has been elected national physician of the Knights of Columbus.

Dr. E. B. Jackson, of Aberdeen, S. D., was married last month to Mrs. Lida Hubbard, of the same city.

Dr. A. T. Laird, of Saranac Lake, N. Y., has been appointed secretary of the St. Louis County Sanitarium Commission.

Dr. S. B. Herdman has resigned as physician to the mining company at Gilbert, and will locate in Taylorsville, Ill.

Dr. J. A. Du Boies, of Sauk Center, has been appointed physician to the State Industrial Home for Girls at that place.

Architect Edwards, of Fargo, N. D., has about completed the plans for the sanitarium to be built by the State at Dunseith.

At the July examination for licenses to practice in North Dakota, thirty applicants passed successfully, not one failing. The list is given below.

Dr. Lyle Hare, a recent graduate of the University of Illinois, has been appointed medical inspector at the Deadwood (S. D.) Normal School.

At the July meeting of the Hennepin County Medical Society a strong and well-worded protest against the removal of Dr. Wiley was sent to Washington.

Dr. S. J. Froshaug, of Benson, is building a 20-room hospital. The building will be 58x34 and three stories high. It will be named the Benson Hospital.

Dr. M. P. Ravenell, Professor of Bacteriology at the University of Wisconsin, and noted expert in tuberculosis, was a visitor at the State University last month.

Dr. F. H. Buck, a recent graduate of the University of Toronto, who has been an interne at St. Joseph's, St. Paul, for the past six months, has located at Shakopee.

Dr. Leon G. Smith, a 1910 graduate of the State University, has located at Buffalo. Dr. Smith has just completed a year's work as interne in the Minneapolis City Hospital.

The North Dakota State Board of Medical Examiners met at Fargo on Aug. 1st, and elected the following officers: President, Dr. Paul Sorkness, Fargo; secretary, Dr. G. M. Williamson, Fargo.

Dr. H. W. Hill, epidemiologist of the Minnesota State Board of Health, has been appointed by the Board a delegate to the American Public Health Association, which meets in Havana, in December next.

Two "medical institute" men have been convicted in New York of using the mails for fraudulent purposes. The Institute is located at Collins, N. Y. Jail sentences follow convictions in the U. S. courts.

Dr. E. J. Davis, chief surgeon of the Minnesota Soldiers' Home, has resigned his position on account of poor health, and will locate in California. Dr. O. S. Pine, of St. Paul, was elected successor to Dr. Davis.

The Mount Marty Hospital Association has been incorporated at Yankton, S. D., and if the necessary funds can be raised a hospital to cost \$250,000 will be built. Bishop O'Gorman is honorary president of the Association.

The Minnesota State Board of Health is planning to give the teachers and students in our normal schools and smaller colleges a free course of lectures in sanitary matters. Dr. James Hoenj, of Boston, will have charge of the work.

Dr. C. P. Lommen, Dean of the College of Medicine of the University of South Dakota, visited the University of Minnesota last month, and inspected the new hospital building and the plans of the medical department for its expansion.

We learn through advertisements in the country newspapers that Dr. Halloran has established a sanitarium in St. Paul, 651 E. Third St., where he cures, by his "Capsular Treatment," "all chronic diseases except consumption and Bright's disease."

The second State Detention Hospital for Insane is now ready at St. Peter, and all insane persons committed, except the criminally insane, first go to the Detention Hospital. Patients are examined at the Hospital by a special commission created by the State.

The president of the North Dakota Pharmaceutical Association recommended, in his address before the Association at its annual meeting this month, a campaign of education to the end that effective legislation may be obtained against itinerant vendors of nostrums.

Dr. R. D. Alway, of Aberdeen, S. D., secretary of the South Dakota State Medical Association, wants the physicians of that state who sent him their railroad credentials after attending the annual meeting to write him, as some of them neglected to sign their names.

Dr. Horace Newhart, of Minneapolis, accompanied by his wife and child sails today for Europe to attend the third International Laryngo-Rhinological Congress in Berlin, August 30-Sept. 2. Before returning Dr. Newhart will do clinical work in Berlin, Vienna, Freiburg, and London.

Dr. Chas. Lyman Greene, of St. Paul, Chief of the Department of Medicine at the State University, spoke before the Camp Release District Medical Society at its July meeting, and in the evening Dr. Greene gave a public address on "The Training of the Modern Physician and Its Relation to the Public Welfare."

Dr. Charles N. Spratt, of Minneapolis, has been elected an associate member of the American Ophthalmological Society. An associate member in this society becomes a full member when he has attended three successive annual meetings, and a member is dropped when he misses three successive annual meetings.

Dr. W. M. Polk, Dean of the Medical Department of Cornell University, visited our State University in July, and after a careful inspection of the new hospital building, the laboratories, etc., and after hearing of the Department's plans, he expressed his gratification over the work being done and the large plans and opportunities of the future.

The Southern Minnesota and the Minnesota Valley Medical Associations held a joint meeting at Rochester on August 3d, and effected the merger of the two societies, which has been under consideration for the past year. The following were elected officers: President, Dr. L. A. Fritchie, New Ulm; first vice-president, Dr. H. F. McGaughey, Winona; second vice-president, Dr. J. E. Crewe, Rochester; secretary and treasurer, Dr. W. T. Adams, Elgin.

Dr. A. O. Arneson has resumed his practice at McVille, N. D., after a year's absence, most of the time having been spent in post-graduate work. The residents of McVille met Dr. Arneson and his family at the train with a brass band, and in the evening a reception was given to welcome Dr. Arneson and to bid goodbye to Drs. E. C. and Agnes Stucke, who had had charge of the former's practice during his absence. It's worth while to practice medicine in such a community. Drs. E. C. and Agnes Stucke have located in Garrison, N. D.

The Sioux Valley Medical Association of South Dakota held its midsummer meeting at Sioux Falls on July 20th, with seventy-five in attendance. Several papers were read, and full discussion followed them. In the evening a theater party was given by the local physicians, and a smoker followed. Officers were elected as follows: President, Dr. J. E. Garven, Sioux City, Iowa; first vice-president, Dr. G. G. Cottam, Sioux Falls, S. D.; second vice-president, Dr.

C. O. Wright, Luverne, Minn.; treasurer, Dr. S. A. Brown, Sioux Falls, S. D.; secretary, Dr. G. S. Browning, Sioux City, Iowa. The mid-winter meeting will be held at Sioux City, Iowa.

The St. Paul Baby Welfare Association is the name of a new organization in St. Paul which has already entered upon a career of very great usefulness. The Association has quarters at 391 East Eighth St., with Miss Etta M. Forbes, a competent nurse, in charge. Clinics are held here three times a week by Dr. Walter R. Ramsey, the specialist in pediatrics. The attendance upon these clinics has been large from the first, and their usefulness has been demonstrated in one rather surprising way, and that is by placing back upon the breast infants that had been weaned upon the advice of some physicians and of many laymen. The first step in every clinic is, of course, to provide for the immediate needs of the babies, the next is to provide for pure milk when milk is to be given, and the next and greatest is to educate the mothers. The work of Dr. Ramsey in the clinic is followed up by the work of the nurse in the home. Literature is to be printed in every language necessary to reach all mothers in St. Paul, and a propaganda for breast-feeding will be carried beyond the laity to the profession. Minneapolis has a similar society, and it is proposed to distribute pure milk for babies from the four large settlement houses of the city.

PHYSICIAN WANTED

A Scandinavian physician is wanted for a good location in Minnesota. Address B. S., care of this office.

ASSISTANT WANTED

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REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polomyelitis	Typhoid Fever	Diarrheal Dis- eases of Children	Cancer	Puerperal Septicemia	
Ada	1,253	1,432	*														
Albert Lea	4,500	6,192	1														
Alexandria	2,681	3,001	6	3													
Anoka	3,769	3,972	8	1		2							1				
Austin	5,474	6,960	8	1				1									
Barnesville	1,326	1,353	1														
Bemidji	2,183	5,099	4	3													
Benson	1,525	1,677	2														
Blue Earth	2,900	2,319	3		1												
Brainerd	7,524	8,526	9	3		1								2	1		
Breckenridge	1,282	1,840	3														
Canby	1,100	1,528	2														
Cannon Falls	1,239	1,385	1														
Chaska	2,165	2,050	*														
Chatfield	1,426	1,226	0														
Cloquet	3,074	7,031	6	1	1	1			1								
Crookston	5,359	7,559	5	1		1										1	
Detroit	2,060	2,807	2														
Duluth	52,968	78,466	69	5	1	6								6	2	1	
East Grand Forks	2,077	2,533	*														
Ely	3,572	3,572	2														
Eveleth	2,752	7,036	4												1		
Faribault	7,868	9,001	3														
Fairmont	3,440	2,958	0														
Fergus Falls	6,072	6,887	7						1							1	
Glencoe	1,788	1,788	0														
Granite Falls	1,454	1,454	0														
Hastings	3,811	3,983	4	1													
Hutchinson	2,495	2,368	1														
International Falls		1,487	2														
Jordan	1,270	1,151	0														
Lake City	3,142	3,142	3			1											
Litchfield	2,280	2,333	6	1												1	
Little Falls	5,774	6,078	2			1											
Luverne	2,223	2,540	3			1										1	
Le Sueur	1,937	1,755	2			1											
Madison	1,336	1,811	2														
Mankato	10,559	10,365	15			1							1	1	3		
Marshall	2,088	2,152	5								1						
Melrose	2,591	2,591	*														
Minneapolis	202,718	301,408	312	40	5	35	14	2	1	1	10		1	7	25	1	
Montgomery	979	1,267	1														
Montevideo	2,146	3,056	2														
Moorhead	3,730	4,840	10	2									1		1		
Morris	1,934	1,685	1														
New Prague	1,228	1,554	0														
New Ulm	5,403	5,643	9	1		1				1			1				
Northfield	3,210	3,215	3	2													
Ortonville	1,247	1,774	4														
Owatonna	5,561	5,658	9	1	3		1							1			
Pipestone	2,536	2,475	1														
Red Lake Falls	1,666	1,666	1			1											
Red Wing	7,525	9,048	13	1		1											
Redwood Falls	1,661	1,666	0														
Renville	1,075	1,182	0														
Rochester	6,843	7,844	23	2		1		1							3		
Rushford	1,100	1,011	0														
St. Charles	1,304	1,159	0														
St. Cloud	8,663	10,600	16	2	1	1	1			1					1		
St. James	2,102	2,102	3			1											
St. Paul	163,632	214,744	194	21	4	23	5				3				5	11	2
St. Peter	4,302	4,176	6														
Sauk Centre	2,154	2,154	2												1	1	
Shakopee	2,046	2,302	3														
Sleepy Eye	2,046	2,247	1														
South St. Paul	2,322	4,510	2			1											
Staples	1,504	2,558	1														
Stillwater	12,318	10,198	9	2										1		2	
Thief River Falls	1,819	3,174	2	1												1	
Tower	1,111	1,111	0														
Tracy	1,911	1,826	1														
Two Harbors	3,278	4,990	10	3										6	1		
Virginia	2,962	10,473	9	1		2					1						
Wabasha	2,622	2,622	7			1										1	
Warren	1,276	1,613	2			1											
Waseca	3,103	3,054	2	1													
Waterville	1,260	1,273	3														
West St. Paul	1,830	2,660	1			1											
Willmar	3,409	4,135	3	1													
Winona	19,714	18,583	15	1													
Winthrop	813	1,043	1														
Worthington	2,386	2,385	1			1											

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

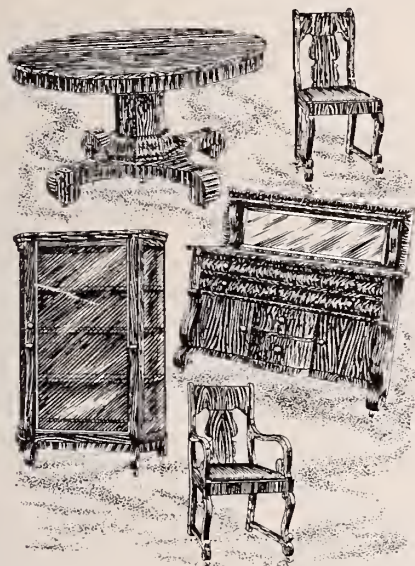
VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	1						1							
Aitkin	1,719	1,638	1													
Akeley			1						1							
Appleton	1,184	1,221	1													
Belle Plaine	1,121	1,204	0													
Biwabik		1,690	1			1										
Bovey		1,377	0													
Browns Valley	721	1,058	0													
Buffalo	1,040	1,227	1					1								
Caledonia	1,175	1,372	2													
Cass Lake	546	2,011	1	1											1	
Chisholm		7,684	6													
Coleraine		1,613	1			1								1		
Dawson	962	1,318	2	1												
Delano	967	1,031	1													
Farmington	733	1,024	1			1										
Fosston	864	1,055	0	1												
Frazee	1,000	1,645	1													
Glenwood	1,116	2,161	*													
Grand Rapids	1,428	2,239	5													
Hibbing	2,481	8,832	9	1		2										
Jackson	1,756	1,907	2													
Janesville	1,254	1,173	0											1		
Kenyon	1,202	1,237	3				2								1	
Lake Crystal	1,215	1,038	1	1												
Long Prairie	1,385	1,250	3	1											1	
Madelia	1,272	1,273	0													
Milaca	1,204	1,102	2	1												
Mountain Lake	959	1,081	0													
Nashwauk		2,080	1	1												
North Mankato	939	1,279	0													
North St. Paul	1,110	1,404	2	1												
Osakis	917	1,013	0													
Park Rapids	1,313	1,850	2													
Pelican Rapids	1,033	1,019	1						1							
Perham	1,182	1,376	*													
Pine City	993	1,258	2			1										
Plainview	1,038	1,175	0													
Preston	1,278	1,193	0													
Princeton	1,319	1,555	1													
St. Louis Park	1,325	1,743	0													
Sandstone	1,189	1,818	1											1		
Sauk Rapids	1,391	1,745	3	1												
South Stillwater	1,422	1,343	3												1	
Springfield	1,511	1,482	0													
Spring Valley	1,770	1,817	1													
Wadena	1,520	1,820	2												1	
Wells	2,017	1,755	*													
West Minneapolis	2,250	3,022	1													
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	2								1					
Windom	1,944	1,749	4				1									
Winnebago City	1,816	2,555	*													
Zumbrota	1,119	1,138	1													
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			12	7												
Rochester, Hospital for Insane			6	3												
St. Peter, Hospital for Insane			7			1							1			
Anoka, Asylum			1													
Hastings, Asylum			3	1												
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			19	2	1	4			7							
Owatonna, School for Dependents																
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			6													
OTHER PARTS OF STATE			711	69	5	69	17	11	15	....	5	2	3	27	38	7
Total for state			1718	194	22	165	41	16	30	1	21	2	16	54	100	12

*No report received. Registrar not doing his duty.

208 stillbirths and premature births not included in above totals.

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All physicians fully realize the importance to themselves and their patients of confirming diagnoses by the best means known, particularly in obscure diseases, when the symptoms are conflicting, but frequently the busy practitioner does not have the necessary time to study carefully each case or the proper laboratory facilities are not at hand, and he must of necessity look to others for assistance in this important branch of his work. To such we would recommend the Beebe Biological Laboratories, Detroit Building, St. Paul, recently established by Dr. W. L. Beebe for the service of physicians.

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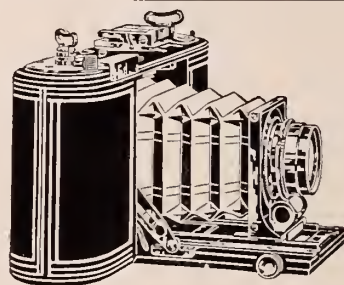
used and the milling processes are new and improved. This puts into the hands of physicians a high-grade product of a food recognized of especial value in feeding invalids, convalescents, babies, and their nursing mothers. The profession should welcome such a product and extend to its manufacturers every possible encouragement that they may be enabled to meet the ruinous competition of cheap processes and low-grade materials.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, SEPTEMBER 1, 1911

No. 17

A VISIT TO SOME OF THE HOSPITALS AND SURGICAL CLINICS OF FRANCE

BY W. J. MAYO, M. D.

ROCHESTER, MINN.

The famous historian, Guizot, said: "There is hardly any great idea, hardly any great principle of civilization which has not had to pass through France, in order to be disseminated."

It is certainly true that many of the greatest discoveries in the medical sciences have originated in and have been disseminated from France. Here was the home of Pasteur, the greatest scientist the world has ever known. Great as was the work of Lister and Koch, they were, nevertheless, followers in the foot-steps of Pasteur. The only scientist who can be compared with Pasteur is Charles Darwin, who showed the world the manner in which all living things have reached their present stage of development. John Hunter, of the Royal College of Surgeons of England, first consistently studied the macroscopic evidence of disease. To see the wonderful collection made by this persistent student of pathology, put up and labeled in black by his own hands, makes one realize the prodigious industry and profound knowledge of this man in the things that could be seen with the unaided eye. Hunter, like Darwin, saw things that had visible existence; Pasteur, with scientific clairvoyance, saw things which had no visible existence.

To Ambrose Pare, the Huguenot physician of Catherine de Medici, we owe the discovery of the ligature and its application for checking hemorrhage.

Baron Larrey, Napoleon's surgeon, wrote the first treatise on military surgery.

Langenbeck, the father of German Surgery,

received his early inspirations in surgery from France.

Pean was to France what Tait was to England, and the French surgeons owe much to this brilliant but eccentric man. The late Prof. Terrier became the worthy successor to Pean, and the influence of his work may be seen on every hand in the surgical clinics of France today.

France is profoundly influenced by its geographical situation in relation to adjacent countries. The southeast border, where Nice is situated, was secured from Italy as late as 1859, during the reign of Napoleon III. In their essential characteristics, the people of this region are Italians. Victor Emmanuel II, grandfather of the present King of Italy, ceded Savoy, of which he was prince, to France for Lombardy. It is said that Garibaldi reproved the King for ceding Nice, which was the birthplace of Garibaldi, to the French, and Emmanuel replied: "While Nice is merely the birthplace of Garibaldi, Savoy has contained the graves of my fathers for eight hundred years, yet it has been given up in order to restore peace to Italy."

Nice is a city of 80,000 inhabitants. Its principal hospital, Saint Rock, is situated in the heart of the city, and contains some 600 beds. This building is about to be converted to purely surgical purposes. A new one, which is to be built on the outskirts of the city, will be used for medical purposes. Hospitals in France are supported, generally, by a combination of the nation, the province, and the municipality. The size of the

city, therefore, does not control the size of the hospital.

One-fourth of the space of Saint Rock's Hospital is devoted to the military surgical service under the charge of the military surgeon. The wards are all large, containing about 30 beds. The nursing is in charge of the Sisters of Charity, who are more or less trained. The Sisters are assisted by men and women helpers. A training-school for nurses was established here at one time, but it lasted only a year, and was the occasion of jealousy and bad feeling generally. The Sisters do the dressings, have charge of the pharmacy, and operate the x-ray department. Three operating-rooms are in use; all small and rather primitive in their equipment. I had the pleasure of meeting Dr. Charles Figuiera, surgeon to Saint Rock. He is a well-trained surgeon of the French-Italian school. One of the difficulties this hospital labors under may be found in the city hospitals in our own country, and that is a large unpaid staff with short terms of service.

There are two fine private hospitals in Nice. The English Hospital, built and maintained by the English visitors to the Riviera, in honor of Queen Victoria, who spent the winter months in this mild climate during her later years, and the D'Essling Memorial French Hospital, of about 30 beds. Both of these hospitals are well equipped and quite modern in their arrangement.

It is a far cry from Nice in the southeast to Lausanne in the north, and, strictly speaking, since Lausanne is Swiss, it should have no place in this narrative, but just as Nice is a little of Italy in France, so is the Canton of Vaud, of which Lausanne is the capitol, a little of France in Switzerland. Although lost to France as a nation, it is still French in language and sentiment.

In the surgical clinic of that master surgeon, Roux, at the Cantonal Hospital, is to be seen the blending of the two schools of surgery, German and French. Roux is an active, energetic surgeon in the prime of life. He is chief of the surgical clinic in the hospital, and head of the department of surgery in the medical school. He is a splendid teacher, and teaches in French, although he speaks a little English. I was surprised to find there so large a number of women medical students, many of whom were Russians. The Cantonal Hospital is clean, and the general care of the patients good. The nurses, however, are not trained, in the American sense. Roux is a rapid operator, and a bold and independent surgeon. Many of his methods are original.

After carefully washing the hands, the ends of the fingers up to the first joint are painted with tincture of iodine. He does not usually wear gloves, except to protect his hands in dirty operations or occasionally for clean operations. Head, face and arms are not protected. His assistants follow his example in these particulars. As contrasted with the American custom of dry operating, various antiseptic solutions are used freely in the clinic. Iodine preparation of the skin at the site of operation is occasionally employed. At times, cotton gloves are used, especially in intestinal operations for the purpose of steadying the gut. Roux used the Reverdin needle almost exclusively, except in intestinal work, and he was extraordinarily facile in its use. The Michel clips were used in closing the skin. The German custom of bringing patients naked, covered by a sheet, into the operating-room and placing them on the operating-table, is practised in this clinic. It would seem that the higher prevalence of pulmonary complications in many foreign clinics, as compared to those in America, might have something to do with exposure.

On April 24, 1911, I was present in the clinic while Roux operated upon nine cases. Two of these were infected appendices, one a chronic appendicitis, operated upon through a small abdominal incision, using a circular suture about the base of the appendix and inverting it. One was a retrocecal appendix in the subacute stage, which was quite troublesome on account of adhesions, and required a long incision. It was a difficult case, and Roux relieved our tension, as well as his own, by whistling, with startling accuracy, the few notes of the meadow-lark, when the tangle was straightened out.

Three of the cases were goiters, all cystic, and all treated by enucleation. Most of the enucleation was done by the fingers, assisted by gauze, considerable force being used. The capsule and remnant of gland was sutured with catgut, and a rubber drain inserted through a stab near the suture-line of the collar incision. The muscles were not sutured, the skin being drawn together with clips. Roux remarked that the enucleation method was not pretty, but gave fine results.

One case was an umbilical hernia in a child. The ring was excised and the recti muscles drawn together with sutures.

A gastro-enterostomy was done for a large duodenal ulcer. Roux did not do the "Y" operation which bears his name, but the posterior "no-loop" operation, with which we in America are all familiar. A transverse, abdominal incision,

half-way between the umbilicus and the ensiform cartilage, was made. The recti muscles were retracted from their sheaths, quite as is done in the suprapubic operation of Pfannanstiel. I had never before seen this procedure employed in the upper abdomen. It certainly worked very well. Clamps for holding the stomach and intestine were used in the muscular and mucous layers and in the peritoneum. To prevent leakage from the stomach and jejunum, small gauze pads were inserted into the stomach and intestine, and when the operation was completed they were squeezed down past the gastro-enterostomy opening into the jejunum a few inches. He said that the patients sometimes had colicky pains, but that they always passed the pads.

In suprapubic prostatectomy the bladder was filled with fluid before opening, and sutured to the aponeurosis with several sutures. The enucleation was made with the bare left hand, the gloved right fore-finger being used in the rectum to elevate the gland.

There was also a case of osteomyelitis of the humerus.

Paris has about twenty-five hospitals and many fine surgeons. I regret that my limited stay there did not permit me to see them all. It is undoubtedly true that Americans often judge the effectiveness of hospital organization by the operating-room ceremonials, and, unfortunately for this method of judgment, the operating-room ritual in some American and a few foreign hospitals outside of France, might be compared, in their extraordinary detail, to the mysterious ceremonials attendant upon a lodge initiation. As a matter of fact, each hospital's method can be judged only by its end-results. It is not necessarily the man with the most elaborate aseptic technic who is the best surgeon; and when this atmosphere of technic becomes a ceremonial, the observance of which is more carefully attended to than the operation itself, the results may be anything but desirable. I have at various times heard a great deal of criticism from surgeons concerning some of the French hospitals because the aseptic methods in the operating-rooms differed from the methods employed in their own, and were, therefore, necessarily bad.

The hospitals in Paris vary in regard to methods employed, just as they do in any large city. In some of them the technic is aseptic and elaborate; in others, the opposite conditions prevail, and while the results may not, in general, be equal, I certainly was impressed with the fact

that success depended more upon the individual skill and judgment of the operator and the organization of the clinic than it did upon elaborate aseptic frills.

Prof. Tuffier is Professor of Clinical Surgery at the University of Paris, and Surgeon to the Hospital Beaujon. This hospital was founded in 1784 by the Minister of Finance. During the time of Napoleon III it was reconstructed on the pavilion plan, surrounding many small, green courts. It now has a capacity of over 600 beds. The operating-rooms are located in a separate pavilion. They are modern in their appointments, and quite as we are accustomed to see them here. The hospital is conveniently situated, about five minutes' ride from the Place de la Concorde.

Tuffier is a man in the early fifties. He is erect in bearing, energetic in his movements, and in the ten years since I saw him last, he had changed but little in appearance. Tuffier has scientific imagination. He is a dreamer of true dreams, an investigator of great originality, and a surgeon of rare and unusual ability. I had gained this impression on a former visit to France, and since then have endeavored to keep in touch with him through his written contributions to surgery. Tuffier has earned, and deservedly holds, a place amongst the great surgeons of the day.

The aseptic technic is as carefully carried out in this clinic as in any I have visited, yet nothing appeared to be done extravagantly or for effect. Tuffier wears rubber gloves, sleeves, and cap, but no face covering. Instruments are sterilized dry, and iodine preparation of the skin is carried out in some cases. Like all French surgeons he uses the long-handled Reverdin needles for nearly all purposes except intestinal work. Michel clips are used for the skin. I witnessed a number of operations in his clinic and will describe a few of them.

In a case of tuberculous peritonitis due to tubal tuberculosis, the fluid was sponged out carefully, the tubes removed, and the pelvis mopped with pure tincture of iodine. The wound was closed without drainage.

Another case was the enucleation of fibroids, an operation he prefers to hysterectomy, if practicable, during the child-bearing period. With a sharp knife an incision was made down into the tumor, and with a strong, sharp hook it was quickly evulsed from its bed. The incision was made as close as possible to the median line of the uterus, away from the blood-vessels. Occasionally he removes a second tumor through an

incision made in the bed from which he has just extracted a fibroid. In this case there were about nine tumors removed. All sutures used were of catgut.

In a case of unreduced fracture of the humerus he intended to use one of Lane's splints, but as there was no tendency to recurrence of the deformity upon replacement, he did not use it.

In one case he made a new joint in an ankylosed elbow by introducing into the obliterated joint-cavity the cartilage taken from the knee of an amputated leg which had been in cold storage for some days. The cartilage contained a little bony surface, which was placed in contact with the prepared end of the humerus.

The work which interested me most in this clinic was the methods employed in connection with the ovaries and tubes. In the employment of these methods Tuffier has made many interesting observations. For example, if one or both of the ovaries removed are transplanted either in the tissues just next the peritoneum where they are protected from injury, or just under the skin for observation, the patient will continue to menstruate for years and quite normally. In an operation he performed for infected ovaries and tubes, the tubes and ovaries were removed. One ovary was sterilized by passing through the flame of an alcohol lamp and buried next to the peritoneum. A number of patients who had been operated upon some time previously were shown to me. In one woman whose ovary had been buried just beneath the skin, the ovary could be felt large and tender to the touch, which she said was always the condition during menstruation, which was present at this time.

Tuffier believes that the corpus luteum is the cause of menstruation, and that during menstruation there is an elimination of certain accumulated poisons, the retention of which, in young women, brings about the nervous catastrophes which sometimes follow premature production of the menopause. In 120 instances Tuffier has transplanted ovaries, but has never succeeded in continuing menstruation unless the ovary was taken from the same woman. He has tried substitution in white, black, and yellow races, and it has always failed. He says that, if the tubes are removed and the ovaries left in their normal position, disturbed menstruation with increased flow often follows.

I was very much interested in the use of radium for angiomas and lymphangiomas. Tuffier believes the action of radium to be large-

ly upon the blood-vessels, and that it does good only in the vascular cases of sarcoma and carcinoma, and even these it does not cure, with the possible exception of superficial epitheliomata. The patient operated upon was a girl of 16 with a soft, disfiguring angioma of the cheek and side of the face. A small incision was made in the cheek, and the tube of radium was pushed in and sealed, the small attached wire left projecting externally. The tube is removed at the end of twenty-four hours. It is sometimes necessary to repeat the treatment once or twice at intervals of several months. I observed a number of patients that had been treated in this manner, who were there with photographs of their previous condition. I have never seen results in angioma that begin to compare with those shown me by Tuffier following this treatment.

Another interesting case was a man with an old abscess of the lung, from which Tuffier resected four inches of a rib, and with his finger loosened up the pleura, compressing the lung cavity by pushing in this outer wall until the abscess cavity collapsed. The lung cavity was not, of course, opened, but the abscess was allowed to continue drainage through the bronchus. Into this raw space he packed a piece of omentum about the size of a fist, which was taken from cold storage. He told me that a number of cases had been cured in this manner.

Tuffier keeps in cold storage pieces of omentum, blood-vessels, tendons, and other human by-products, and says that less toxicity occurs from material used from cold storage than occurs from the fresh material. He is experimenting with human instead of sheep catgut, and says that it is much stronger.

Prof. Pozzi is surgeon to the Hospital Broca. The Hospital Broca is a hospital of 300 beds, devoted exclusively to women. Pozzi, who is director and surgeon-in-chief of the hospital, is well known to American surgeons. He has made several visits to this country, is a member of the American Surgical Association, speaks English fluently, and has written a number of books on diseases of women, one of which was translated into English in two volumes about ten years ago.

An American physician, resident of Paris, said to me: "Prof Pozzi took possession of the Hospital Broca when it was nothing but an old barracks unfit for human beings, sick or well. He has converted it into what you see today." As one approaches the hospital from a narrow street and enters the enclosure, the appearance is

disappointing, but upon going within the esthetic aspect is most impressive and interesting.

Prof. Pozzi is a Senator of France, and a figure in the national life of his country. He may be said to have the artistic temperament. As an evidence of his friendly association with musicians and artists, are great paintings which have been placed, many of them gratuitously, upon the walls of the wards and rooms in his hospital, paintings which are real works of art. On Monday afternoons concerts are given in the central hall. These concerts are given in charity by some of the great opera singers and leading musicians of Paris.

The Hospital Broca is one of the few hospitals in Paris to contain a pavilion of private rooms which are up-to-date in character. Prof. Pozzi has traveled extensively and, being a keen observer, has brought from many countries ideas to incorporate into his hospital. In the clinic operating-theater where he lectures the students are in a gallery protected by glass set at an angle to enable them to look directly through the glass into the field of operation. Since the glass is only about the height of the student, he is able to hear plainly what is said by the surgeon during the course of the operation.

Pozzi's hospital organization is very complete. The pathologic laboratory is immediately associated with the operating-room and under the supervision of Dr. Lattaux, who was engaged, at the time of my visit, in a research of carcinomata of the female genitalia. In the experimental laboratory connected with the hospital, Dr. Champy demonstrated the extreme toxicity of the corpus luteum. Rubbing it with water, he injected it into a rabbit, and the rabbit died in two minutes. One minute after death the uterus was found congested and turgid with blood.

In the museum was a large number of wax models, splendidly executed, of interesting and unusual cases. Among others were models of two cases in which Pozzi had formed a new vagina after a method of his own. I had an opportunity to examine one of the patients, a married woman, who had been operated on two years previously. The pouch or artificial vagina was about four inches in depth, quite free from any sign of inflammation or irritation, and with no tendency to contract.

The morning I visited his clinic Pozzi operated upon three cases. The first, a case of extra-uterine pregnancy; the second, abdominal hysterectomy for fibroids; and the third, a vaginal hyster-

rectomy with clamps. The operations were all beautifully executed and occupied only an hour and a half. Between operations, Pozzi had time to show different points of interest about the hospital.

Prof. Henri Hartmann, surgeon to the Hospital Bichat, was the assistant to the late Prof. Terrier, and his successor as Professor of Surgery at the University of Paris.

The Hospital Bichat is built on the old rumparts, and it has the most active surgical service of any hospital in Paris. Prof. Hartmann has accommodations for 100 patients, nevertheless his wards contain 150 beds. His justly earned reputation attracts an unusual number of interesting cases. Prof. Hartmann is in the early fifties. He speaks English, but not fluently. His surgery impresses one as being both sound and sane, and I came away with the feeling that one might safely trust one's self or friends in his hands. Without any attempt at brilliancy, he applies the best of known methods in a manner most calculated to benefit the patient. He has done a large amount of original work in connection with the stomach, kidney, prostate, and ureter.

The operating force of the hospital is well organized, and the aseptic details carefully planned and well carried out.

I was present while he operated upon three patients. The first was a case of cholecystitis. The patient was placed in a slight Trendelenburg posture with the liver region elevated. The gall-bladder was removed. The second case was duodenal ulcer for which gastro-enterostomy was performed with the patient in the same position. Clamps were not used, but the "no-loop" method was chosen. The third case was chronic appendicitis. The operation was performed through a small incision. The three operations occupied a little over an hour.

Prof. Faure is surgeon to the Hospital de la Charité, which was founded in 1602 by Henry IV. Part of the original building still stands. The hospital now contains 650 beds. The entire hospital is very old, and looks its age. It is overcrowded and badly equipped, yet the patients look comfortable and happy. The operating-rooms, however, were clean and well conducted, and the organization good. Faure and his assistants wear rubber gloves, sleeves and head and face covering.

I had the pleasure of seeing Faure perform a complete abdominal hysterectomy of the Wertheim type for cancer of the cervix. The patient was placed in the high Trendelenburg posture

and a modified Doyen retractor used, which gave splendid exposure and practically converted a longitudinal abdominal incision into the Pfannanstiel transverse. Faure used a number of instruments which he has originated for this particular operation. I brought several of his devices home with me and have found them very useful. The operation was done in the ordinary manner, the ureters being exposed and separated from the bladder; the glands and fat, the uterus, and a half of the vagina being removed in one piece. A rubber tube with some gauze was introduced into the vagina and the sigmoid sutured to the bladder-flap, making a complete covering. The operation lasted forty minutes, and I have no hesitation in saying that it was a little the best operation of this kind I have ever seen.

Prof. Delbet is at the Hospital Necker, which was founded in 1773. This hospital is built in the two-story connected-pavilion style and has 500 beds. Hospital Necker has been made notable by Albarran, the genito-urinary surgeon, who has done so much in developing operations of the prostate.

Delbet's operating-room technic is carefully conducted. The first case was a goiter, which was removed through a longitudinal incision. The second case was duodenal ulcer. Gastro-enterostomy by the "no-loop" method was done without clamps. Linen was used for the inner row of sutures and catgut for the outer row. Delbet is a clean, careful and experienced surgeon, and ranks deservedly high amongst Parisian surgeons.

Prof. Morestin is surgeon to the Hospital Tenon. This hospital is comparatively modern, having been constructed in 1878. It is situated on one of the highest points in Paris and contains 900 beds. Morestin has a great reputation for plastic operations about the face and neck, and he certainly deserves his fame. His patients walk into the operating-room with hair closely clipped, and the head, face, and neck are scrubbed with soap and water by Morestin himself, much as a shampoo would be conducted. Alcohol is then applied, and the cleaned surfaces surrounded by towels. The patient is placed on the table and securely fastened, as very little anesthetic is given. The operation proceeds rapidly.

The first case operated on was a man with carcinoma of the tonsil and base of the tongue, and its removal certainly looked like a hopeless undertaking. At the sternoclavicular angle he double-tied the internal jugular vein and cut between. The fat, glands, and vessels were rapid-

ly dissected, and the lower jaw and entire tongue, tonsil, side of the pharynx, and part of the larynx with the epiglottis were removed. It was a ghastly dissection, but done with speed and precision. A sharp knife was used almost exclusively. The larynx was sutured to the skin and considerable packing with iodoform gauze was placed in the huge cavity.

The second case was a boy with lymphangioma (congenital) of the face. The tumor was lifted up and the seventh nerve dissected out with its ramifications before the tumor was removed. It was a very neat dissection.

The Hospital Lariboisière is located near the Gare du Nord. This hospital is very old and, like all the others in Paris, is constructed on the pavilion plan built three-stories high and enclosing small courts between the buildings. It has a capacity of 1,000 beds.

I witnessed a clinic in surgical diagnosis for the students by Prof. Picque, who was very careful in his explanations and had the students examine cases. He appeared to be a thorough and interesting teacher.

Prof. Reynier, who is on the gynecological service, was absent the day I visited his clinic. The work was conducted by his associate, Dr. Chifalian. The operating-room appeared to be well organized. The anesthetic was given through some patent contrivance, and, like most anesthetics given in this manner, went badly. Not that anything serious occurred, but it was troublesome. Here, as in most French hospitals, dry-gauze abdominal pads were used, as was also the ever-present Reverdin needle. In operating, the surgeon stood at the left of the table. I was glad to see that the patient was warmly wrapped. In this respect there is little to criticise in French hospitals; the patients are usually well protected against chill.

The case operated on was a left pus-tube with involved appendix, which was removed. The right ovary and tube were not removed. The wound drained through the abdomen. Dr. Chifalian does not differ from other French surgeons in being a clever operator, but how he could work so deftly with large gauntleted rubber gloves, of a type used in leather for automobilism, was a mystery to me.

The American Colony in Paris is made up of about 5,000 residents. Owing to the influence of the leading American physician, Dr. Magnin, a beautiful hospital, called the American Hospital, has been erected in a garden-

like park a block or more in extent out in the resident district. The staff is composed of American physicians, surgeons, and trained nurses. Among the patients in this hospital will be found the American art student who has been taken sick, the American tourist who has not included illness in his list of expenses, and many others who are cared for with quite as much consideration as if they were at home. There are private rooms for those who can afford to pay for them. The equipment and general organization is equal to the best in American hospitals. The surgeon, Dr. De Bouchet, is a Philadelphian educated in France. When a student he assisted the late Prof. Terrier, and he is a man of large hospital experience. The operating-room is splendidly equipped. The operating-table in use

there I believe to be an improvement on anything of the kind I have seen. The table can be raised and lowered, and things changed with great ease and rapidity. I was so well pleased with it that I ordered one sent to America.

More than half a million dollars has been collected for the support of this hospital, and the expense of maintenance is cheerfully borne by the patriotic Americans composing the colony. Americans taken sick while traveling abroad and coming here will appreciate the privilege of being cared for under influences and surroundings familiar to them.

In conclusion, I wish to express my personal appreciation of this worthy organization, which has been planned and perfected through the efforts of Dr. Magnin.

THE EARLY SYMPTOMS AND DIAGNOSIS OF PULMONARY TUBERCULOSIS*

BY J. L. ANDERSON, M. D.

POWERS LAKE, N. D.

In presenting this paper before this Association it is not with the idea that I have anything new to bring forth, but simply to keep this all-important question prominently before the medical profession.

You all know that tuberculosis is accountable for from 11 to 15 per cent of the total death-rate of the United States and that this high death-rate could be greatly reduced if we were more alert and diagnosed more cases in their incipency. In no other disease does the restoration to health and usefulness depend so much on detection in its incipency. In a large percentage of cases the evidence is sufficient to make a diagnosis, if we note carefully the symptoms, make a careful physical examination, making it more than once if in doubt, and interpret correctly these physical signs. Unfortunately, we are all lax at times, and as a result we are responsible for many of the cases seen in the later stages of consolidation and excavation.

In the incipient case the lesion, according to the National Association classification, is limited to the apex of one or both lungs or to a small part of one lobe. This may be accompanied by slight or no constitutional symptoms, particularly including gastric and intestinal disturbances or rapid loss of weight.

The source of infection is important, but the tracing of an individual case to an infective origin is a matter of great difficulty on account of the endemic character of the disease; still the family and personal history are important in aiding a diagnosis.

Often, constitutional signs manifest themselves in advance of the physical signs, which are elicited only by careful and systematic examination of the thorax. Still the absence of these physical signs does not preclude pulmonary tuberculosis.

The invasion of the lung is gradual and the picture presented is so diverse that one can easily be led astray. Pulmonary tuberculosis may onset with pleurisy, with gastric disturbances, with hemoptysis, or with bronchitis, or it may follow neglected tuberculosis of the cervico-axillary glands.

Too often the early symptoms are ill-defined, and the onset may be with loss of weight or afternoon tiredness, which may, or may not, be accompanied by flushing of the face. These patients are often told that they are suffering from debility, or that it is neurasthenia. In the apparently healthy we often attribute the development of tubercular symptoms to a cold or grippe without making a physical examination. The person who is subject to a series of colds or an anemia of vague origin calls for a thorough examination.

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

The temperature is of great import in the early diagnosis, for persistent slight variations from day to day are of the greatest importance. The record should be kept for a period of a week and the readings taken four times a day, at 8, 12, 4, and 8 o'clock. The thermometer should be properly placed in the mouth and allowed to remain for five minutes, as the registration of slight variations takes longer. The temperature may be of the intermittent type; that is, it is subnormal in the morning, and 99 or 99.4 degrees in the afternoon or evening. These slight fluctuations may be noted only after slight exercise or at the menstrual period in women.

The pulse may be normal, but more often tachycardia is present. The pulse is generally excitable and may reach a hundred or more on slight emotion or exertion.

Cough may be an early or late symptom, and its presence may be denied by the patient, but how often during an examination one will notice a little hack. The history of a slight cough or huskiness of the voice accompanied by a little mucus when the throat is cleared, is of diagnostic value.

Expectoration in the early cases does not reveal much. The amount is generally small, grayish-white in color, and mucoid in character. The absence of tubercle bacilli, even on frequent examination, does not disprove your diagnosis, for they appear only when there is breaking down of the lung tissue.

Vague pains in the chest are of little or no significance, but where a patient complains of pain in the supra or infraspinous region, especially in the afternoon, it is due to the hyperesthesia of the muscles over diseased lungs. The early dry and serous pleurisies are generally of a tubercular origin and may accompany an early apical lesion, or may be the evidence of a lighting up of an old or healed lesion. The exudative type is often latent and may be easily overlooked, but in some cases a large effusion may be found in an incipient case.

Hemoptysis may be the first symptom that will drive a patient to consult a physician, or a series of hemorrhages may be the first thing to make the doctor realize the serious nature of the disease. A frank hemorrhage in an early case is rare, but blood-stained frothy sputum is found. In these cases one has to be careful to differentiate such a condition from mitral stenosis, slight epistaxis, and the bleeding seen in the acute congestion of the upper respiratory tract.

In certain patients the complexion acquires a

peculiar yellow tint, while others appear to be suffering from a marked degree of anemia. But the examination of the blood rarely reveals anything, except sometimes a slight anemia of the secondary type, so that the physical appearance of the patient is out of all proportion to the blood-findings. In the active pyrexial cases a moderate leucocytosis may be found.

Night-sweats are not a symptom of the early case but rather belong to the later stages of pyrexia and excavation. But a certain clamminess of the palms of the hands is often found.

The presence of physical signs facilitates the diagnosis, which should be well established from the history and subjective symptoms. Too often do we pronounce the lungs all right or say they are perfectly sound on a too superficial examination. In the examination of the thorax too much care can not be taken. The patient should be bared to the waist so as to get a perfect view of the shape and contour of the chest. Then, on percussion and auscultation, there is nothing to interfere with the propagation of different sounds.

No thorax can be said to be peculiar to phthisis, although there are some who say that the alar and phthinoid chest predispose, but more note should be taken of the slight deformities of the chest-wall. As a rule, in the incipient cases inspection and palpation do not reveal much information, neither does percussion as generally applied; but, with good technic and light percussion, one may elicit slight differences in resonance. Thus physical examination of the lungs may yield a completely negative result when the focus is small and surrounded by crepitant lung.

The early signs are best demonstrated by auscultation. Harshness of the breath-sounds affecting the expiratory murmur more than the inspiratory, is an early and important sign. In such case the expiratory murmur acquires a higher pitch and becomes so prolonged as to equal or exceed the length of the inspiratory murmur. Vocal resonance may be slightly increased on the affected side, but an increase of the whispered voice is very important. These signs, accompanied by fine crepitations heard at the end of inspiration, are very significant, but these crepitations may be demonstrated only after a cough and deep breath.

Since the findings of von Pirquet, Wolf, Eisener, Calumette, and Moro the tuberculin tests have been used to confirm the diagnosis, but their use as a short-cut to a diagnosis is to be condemned. It is the consensus of opinion

now, I believe, that the tuberculin tests should be put on the same basis as the clinical-thermometer history and physical examination; that is to say, if the history does not point to tuberculosis and nothing can be found in the chest, and yet the test shows a positive reaction, I do not feel that we are justified in saying that the test shows the patient to be tuberculous, although of course there must be some latent foci somewhere to cause the reaction, but, likely, it is not causing any symptoms. On the other hand except in far advanced and dying cases a negative result is of great value.

The value of the x-ray in the diagnosis of an incipient case is a disputed point. No doubt, though, in the hands of an experienced man a great deal may be learned; but the majority of observers think that the older methods of examination give more trustworthy indications of disease in the incipient case.

Now, in summing up, the important points are, first, that tuberculosis has a definite history unlike that found in any other disease; second, afternoon tiredness, which may or may not be accompanied by flushing of the face; thirdly, slight rise in temperature in the afternoon and evening which persists day after day; fourth, slight cough or huskiness of the voice accompanied by the expectoration of a little mucus; fifth, slight loss of weight; sixth, tachycardia, especially noticed in the afternoon or after slight exertion.

DISCUSSION

DR. JAMES GRASSICK (Grand Forks): This is a very instructive paper upon a very interesting and important subject, one of the live subjects of today when we take into consideration its universality and its destructive nature. Everything depends upon early diagnosis in a case of tuberculosis. A late diagnosis often means death to the patient, while an early diagnosis may mean a life of usefulness to him.

In tabulating large numbers of cases the records show that where the disease has been detected in its incipency 78 per cent can be cured; of those that are fairly well advanced only 50 per cent; and of those still further advanced only 25 per cent or less are cured. This demonstrates, very satisfactorily to me at least, that to be of much use to your patient you must detect the disease very early. To do this the history of the case has to be taken into account, just as much as, and, in my opinion, a little more than, the physical findings. The disease may be in a patient long before we can detect it by any physical signs of which we

have any knowledge. The matter of the surroundings of the patient, his manner of life, his working-hours, and his business have to be taken into consideration.

Any deviation from the normal in any way ought to be taken note of very strictly; for instance, a slight loss of weight, complaint of a tired feeling without any particular cause for it, loss of appetite, and a number of things like that should be carefully taken into account. In the very early stages percussion is of little account. If you wait until you get evidence of the disease through percussion the disease has already become well advanced. Auscultation will give you earlier signs than percussion, and any deviation from the normal should be carefully marked. The patient should be stripped so that you may be able to carefully go over every inch of the chest. You may find a focus where some slight râles or some slight deviation from the normal respiratory rhythm is manifest in an area not larger than a twenty-five cent piece. So, in making an examination, it is imperative that your patient should be stripped, in order that you may go over him carefully, and note differences in corresponding areas.

As to the tuberculin test: I think that it is of great value, especially the negative side of it. The positive side of it is not of so much value, in my opinion. We know that it is very well established that from 70 to 90 per cent of the whole population have, at some time of their lives, been infected with tuberculosis, but they have succeeded in throwing off the disease. There have been manufactured antibodies, and these antibodies, when you inject the tuberculin into the body, will cause it to react, and you may have a reaction of tuberculin, or a positive test when there is no active tuberculosis present whatever.

DR. J. E. ENGSTAD (Grand Forks): In my experience the primary test of tuberculin is the only one we can rely on. After tuberculin has been used once antigen is produced, and if it is desired to test the patient again and tuberculin is used, the patient will not show a reaction due to the antigen produced in the first test.

DR. H. H. HEALY: The dairymen of some districts are learning that. (Laughter.)

DR. J. L. ANDERSON (Essayist): Within the past year in Germany, the von Pirquet test was applied to 300 school children, all the age of fourteen, and 90 per cent reacted; only 30 per cent, however, were definite or suspicious cases. No doubt 75 to 90 per cent of adults would react to a certain extent to a 100 per cent O. T. This goes to show that, although the tuberculin test may give a positive reaction, it does not show that the person is actively tubercular.

In regard to the injection of tuberculin: It depends upon how long a time has elapsed before the second injection is given, whether the first injection augments the second one or not. If we wait two weeks or a month the first injection does not seem to augment the second reaction.

THE DIRECT ELECTRICAL CURRENT IN SCIENTIFIC MEDICINE*

By B. T. GREEN, M. D.

BROOKINGS, S. D.

If an explanation of the choice of my subject were necessary it would be the desire to rescue a valuable therapeutic agent from the disappointments of empiricism and place it upon a dependable scientific basis.

To the end desired, this paper will consider the physical and chemical properties of the direct (galvanic) electrical current as to their effect upon living animal tissue, and will attempt to point out the current's proper and legitimate range of therapeutic usefulness. Its value as an actual cautery in the rapid destruction of pathological tissue and as a counter-irritant and heat-producing agent, and its diagnostic value in nerve degenerations and for the illumination of stomach, bladder, and other body-cavities and orifices, otherwise inaccessible to visual examination, are purposely omitted from the discussion. It considers only the therapeutics of the gentle, almost painless current produced by chemical decomposition in a battery of cells connected in series, with amperage, accurately measured by milliamperemeter and controlled by a rheostat that insures against jars, interruptions, or variations.

In the consideration of our subject it seems necessary to recall, briefly, a few principles of physics and chemistry connected with the production of the direct current, for, without these in mind, galvanism as a remedy is still empirical and unscientific.

In its most elementary conception a battery is an apparatus for the transformation of energy. Chemical disintegration within the cell disturbs the electrical equilibrium of the so-called ether, and the current is the result of its flowing together along suitable conductors outside of the cell to restore the equilibrium thus destroyed. The carbon terminal (positive pole or anode) is arbitrarily regarded as the higher level, hence the current as flowing toward the zinc terminal (negative pole or cathode). Under appropriate conditions these terminals, when immersed in a suitable medium (electrolyte) containing certain chemical substances in solution, bring about chemical decomposition by breaking up the molecule and setting free the elements or groups of elements (radicals) making up the molecule.

Within the electrolyte these separated elements, or groups, are designated as *ions*. Each ion carries its appropriate charge of negative or positive electricity, and moves toward the oppositely charged pole. Those moving from the positive are designated as electropositive and are called *anions*, while those moving from the negative are electronegative and are called *cathions*. Each ion, after delivering its charge of electricity at the pole, becomes a nascent element, or radical, ready to unite with the chemical affinities of the vicinity.

In the familiar example of the electrolysis of acidulated water, oxygen is liberated at the positive pole and hydrogen at the negative. What is true of water is also true of all chemical substances fulfilling like conditions, however simple or complex the substance. In the halogen group, salts of the metals and the alkaloids, invariably the elements represented by hydrogen, are liberated at the negative pole, and the radicals represented by oxygen are liberated at the positive pole.

It necessarily follows that if the electrolyte carries in solution a number of these chemical compounds, the analytic processes will be simultaneous. As the ions become nascent elements, or radicals, at their respective poles, and unite with other elements, or radicals, of the vicinity, a group of new compounds is formed. Necessarily, the free radicals have formed acids around the positive pole, and free metals and alkaline compounds surround the negative pole.

Now, if our electrodes, instead of being immersed in the electrolyte of the laboratory, are applied to an electrolyte of living animal tissue, i. e., the human body, with its content of water and salts of potassium and sodium, we have like results. Surrounding the negative pole are the alkaline hydroxids of sodium and potassium, while in the vicinity of the positive pole are the acids of the chlorides. It follows therefore that the physiological effect of the positive pole is that of an acid, while the physiological effect of the negative pole is that of an alkali.

The effect of an acid upon organized tissue is to harden the albuminoids, and contract fibrous structure, while an alkali softens the tissues and relaxes fiber. Therefore, with the acid positive

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

pole relaxed tissues are contracted, softened tissues are hardened, congestion is reduced, capillary hemorrhage is relieved, and, since pain is accompanied by excessive alkalinity, the acid pole neutralizes the alkalinity and is a sedative to pain. On the other hand, at the negative pole we have the softening and relaxing effect of the alkalies; cicatrices, hardened glandular tissue, strictures, and fibrous growths and deposits are softened and absorption hastened; anemic areas are congested by capillary dilatation, hemorrhage is encouraged, and, by increasing alkalinity, pain is increased.

These diametrically opposite effects of the two poles indicate that, next to determining the adaptability of the direct current to any pathological condition, the choice of poles means everything; that this choice is based upon chemical activity; and that empiricism has no place whatsoever.

But the therapeutic value of the direct current does not stop with the acid and alkaline effects just described. It has been stated that certain chemical substances are decomposed at the poles, that the electropositive ions seek the negative pole, and the electronegative ions seek the positive pole. As a familiar illustration: If the electrolyte be a solution of potassium iodide, and the poles of a galvanic battery be immersed, the dark color of the free iodine is soon observed about the positive pole. It follows that, if a suitable electrode moistened with a solution of potassium iodide and attached to the negative pole, is applied to the moistened skin and the circuit completed, through a larger wet pad placed at an indifferent point, the current decomposes the potassium iodide into its elements, and the iodine ions, being electronegative, immediately seek the positive pole. In their journey through the tissues they are deposited as pure iodine, producing the characteristic iodine effect.

In like manner cocaine is released from its radical and deposited deeply, as with a hypodermic needle. But cocaine, being electropositive, the solution is necessarily placed upon the positive electrode. The process is known as *phoresis*, *cataphoresis*, or *anaphoresis*, according to whether the element so used is electronegative or electropositive. The metals are electropositive, and if metallic electrodes are used on the positive pole, the salts of the metals are deposited in the tissues. In electrotherapeutics, copper and mercury are extensively used for their antiseptic effects.

The very wide range of application of phore-

sis is at once apparent, and it is readily seen that where polar effect and phoresis may be combined the therapeutic value may be doubly efficacious.

If the foregoing be true, the value of the direct current in the treatment of pathological conditions rests entirely upon physical and chemical behavior under the universally accepted laws of science.

It remained only for such scientifically minded clinicians as Apostoli, Newman, Massey, Neiswanger, and others, to demonstrate the applicability of these principles to the treatment of many diseased conditions. The direct current is not a cure-all, but from the foregoing it is seen that it is an indicated remedy in many pathological conditions. Success in its application depends upon properly selecting and applying a suitable electrode, determining and employing a suitable quantity of current during a proper length of time, and, if required, repeating the treatment at proper intervals. In short, success depends upon mastery of principle and mastery of technic.

DISCUSSION

DR. GREEN (Essayist): Yesterday I got a little piece of beefsteak at the meat market in order to demonstrate a few statements made in the paper. I inserted two copper electrodes, one in either end, and turned on forty milliamperes direct current for about twenty minutes. After the current had been active for a little time one of the electrodes began to loosen, necessarily the negative. The tissues began to soften so that the electrode would not stay in the beefsteak, due to the dissolving effect at the negative pole, but the other electrode began to stick so that it could hardly be drawn away. I took my scalpel to open it up. In this case, if I had applied litmus paper, I should have found it alkali at this end (indicating), and this end (indicating) I should have found acid. You can see around the negative pole the tissues are softened, all dissolved out, while around the positive pole hardening has taken place, and it is stained with salts of copper. You will find the stain passes in quite a little further, perhaps half an inch further, than the electrode was introduced, and, looking at the edges, you can see it was forced an eighth of an inch into the tissue.

Suppose this is a female uterus, and we have a diseased endometrium and a contracted cervical canal, what would be the procedure? Take a small metal electrode, copper or whatever it may be, introduce it into the cervix, and turn on the negative current, repeating this at proper intervals until the dissolving effect of the current increases the size of the canal. It does it without pain, and it opens the uterus for drainage. This alone is often sufficient to cure the diseased endometrium, but the treatment is more effective if we pass our copper electrode into the uterus and get the effect of the copper salts, which are antiseptic. After treatment we shall find a greenish discharge, without odor, which is nothing more than the sloughing away of the diseased tissue from the cavity

of the uterus. The success obtained by this method, in my opinion, is far better than that obtained by the average curettement.

DR. H. J. G. KOOPS (Scotland): I do not like to pass this paper by without saying a word. I want to commend Dr. Green for giving us this paper. I feel that it is splendid, and every word that he has told us is true. Some years ago I was impressed with the fact that we were living in an age of therapeutic nihilism, and we were drifting more and more to what is termed *physiological therapeutics*, and I think electricity comes under that head perhaps, although it is really as much a chemical agent as it is anything else.

I want to emphasize the points made by Dr. Green in regard to the value of the direct current in gynecological practice especially, and those of you who have used it correctly have doubtless been impressed with the fact, as I have been, that there is nothing we can use that will serve as good a purpose as the direct positive current applied intra-uteri in certain cases. A hard contracted os, which is so frequently the cause of dysmenorrhea, especially in young women, is again most agreeably relieved by applying the negative pole to the cervix. Again, it is useful in operations that can be done by cataphoresis, the destruction of superfluous hairs, the removal of moles, warts, and things of that kind. It is surprising how grateful patients are if we use it in that way and afford them relief. I think it has a place in every physician's armamentarium and becomes a very valuable adjunct.

DR. B. A. BOBB (Mitchell): Several years ago I purchased an outfit of this kind before I was familiar with its use. I think that is the trouble with the average practitioner; he purchases an outfit and is not familiar with either end of the pole. I attempted to use it to some extent, but, for the reason stated, my results were not what I desired, and it was hung on the wall where it still remains. For seven or eight years it has not been touched.

I would like to ask the doctor whether his treatment of dysmenorrhea by the application of the current simply has been uniformly successful.

DR. HUNTOON: I want to ask Dr. Green a question. He spoke of the use of the negative pole in a tightly contracted cervix and the relaxation effected. I would like to ask what course he would pursue if the opposite condition were present,—if he had a relaxed uterus or cervix in a young unmarried woman, where there is an acid discharge and a persistent excoriation around the cervix, where it is so highly relaxed you can pass a probang with a little cotton on. I would like to ask whether he would reverse the poles, and use the positive pole in the uterus for its contracting effect, in order to bring that cervix down to its normal condition and relieve that acid and disagreeable discharge.

DR. G. C. COTTAM (Sioux Falls): I would like to ask the doctor about the application of the current to various enlargements. We heard a great deal years ago, what electricity would do in cases of fibroids, and Dr. Massey, I believe, is still using it. I am not familiar enough with the use of electricity to feel that I understand the use of it in that connection. Dr. Green's paper has presented the subject in a direct and forcible light to me.

Let me also add a word in connection with cicatricial tissue. It seems to me that cicatricial tissue in the

wrong place is the greatest bugbear the surgeon encounters. Wherever it may be, we invariably have a good deal to contend with. It does seem to me that, scientifically applied, electricity ought to be a great help to us in that connection. I would like to hear from the doctor's experience and observation, whether it proved in these cases all that he hoped it would. Does the deposit of fibrous tissue stay away after it is treated, or does it recur as after surgical procedure? I have certain cases in my mind, and I like to ask the doctor these questions for my own guidance.

DR. W. D. FARRELL (Aberdeen): A few years ago there was a salesman in my office telling me about the wonderful things that could be done with electricity. The subject of urethral stricture that Dr. Green has spoken about was one that I was interested in then, and I had a case just below my office which was giving me a great deal of trouble in trying to get a slow dilatation with a sound. I asked the patient to come up to my office, and this salesman had a small battery which I now know contained about eight dry cells. He used an electrode with a silver tip, and he went through that stricture very easily in about ten minutes; anyway so that I could pass, without much trouble, a No. 26 sound where I could not go through with anything larger than a No. 18 previously. Since then I have used nothing else for urethral stricture. That is the only thing I have used electricity for, because that is the only thing I know anything about so far as the use of electricity is concerned. In the case of that same patient I passed a No. 32 sound six months afterwards, and he had no recurrence of the trouble. I have used it in dozens of cases since, and I can go through the hardest strictures without pain or hemorrhage.

DR. B. T. GREEN (Essayist): In the last case, if the doctor had combined cataphoresis with electrolysis his success would have been better.

Answering Dr. Bobb's question: I do not believe that any of us can say that any method is absolutely successful in every case. The difficulty in most of these cases, as I find it in my practice, is the lack of drainage. If we give the uterus good drainage that is often all that is necessary. If we use copper cataphoresis to destroy the diseased membrane and give an opportunity for new membrane to reproduce itself we have cured that difficulty, and then it is well known that the contracting effect of the positive current will do a great deal toward invigorating a sluggish uterus, one of these conditions that needs toning up. We cannot confine ourselves altogether to the direct electric current, but in these cases I often use the faradic current or use the direct current for cautery effect.

I discussed only one phase of the subject. The experience of purchasing an expensive outfit and then letting it remain in the office without using it is quite a common one. I do not believe a man has any business to take up the subject unless he is willing to learn it from the ground up, either going to school or getting a standard work and going at it, and learning it thoroughly. I believe any doctor who takes up the work in a practical and systematic way will have cause to flatter himself upon the success he will attain.

In answer to the question of the treatment of those acid discharges from the uterus: My first attempt would be to get rid of that inflammation, and I could

not do that with electricity. We must use an application to that surface to get rid of that inflammatory condition, and when rid of that we can introduce the positive electrode in the cervix and get the effect of contraction upon the fibrous tissue to increase the tone and bring the uterus to a normal condition. It will do it if properly handled. If you have a case of that kind you want to get rid of the inflammatory condition first and then use the electric current. To get rid of the inflammation I would use the tampon and indicated remedies to reduce the flaccid condition of the cervix. I use a great deal of fluid extract of hydrastis for that condition.

In regard to Dr. Cottam's question about fibroids: I believe the use of the current would be slow in the average fibroid, and I should not hesitate, if such a case should present itself, to refer it to a surgeon. I know that Massey has done a great deal of work along that line, but I fear Massey has been somewhat of a "crank" in that direction. I believe he oversteps the proper limits in the use of the current in applying it to large fibroids. I believe a case of cicatricial tissue once absorbed and gotten out of the way, is out of the way forever, and I think experience will back me up in that statement. There is no reason why it should come again if dissolved away.

PHYSICAL AND MEDICAL SUPERVISION OF CHILDREN*

BY J. W. ROBERTSON, M. D.,

LITCHFIELD, MINN.

I understand that about 80 per cent of the young men and women presenting themselves for admittance at the State University every year are, in one way or other, physically deformed or defective. These deformities include round shoulders, spinal curvatures, goose-necks, abnormalities of the nasal septa and turbinate bones, mouth-breathing from adenoids, deafness from the same cause, chronic catarrh, defective sight, unsound teeth, etc.

As most of these conditions could have been largely prevented if the individuals had been properly looked after during the growing period of childhood, the first problem that confronts us is, How can we get at these children at the proper age to correct the cause of these abnormalities and deficiencies?

Parents do not recognize the causes of these conditions and will not take the trouble to attend to them when their attention is incidentally called to them, and so the only way, so far as I can see, out of this difficulty is to have all the children thoroughly examined when they first present themselves (at or about six years old) to attend school. You may call this medical school-supervision if you like; but these examinations should be made by thoroughly competent physicians, and every abnormal condition noted on a chart for future reference. A copy of this chart should be given to the parents or guardians, and a copy filed with the teachers, their attention called to these defects, and special attention given to the children. The seats and desks in the public schools should be properly adjusted to each individual scholar.

These matters can be looked after only in the

public schools, because we know that parents at home have made a complete failure in everything pertaining to these affairs. Parents are either very ignorant or careless, or both, when it comes to the physical condition of their children. Many a fine-looking child is hopelessly deformed by allowing him to go, year after year, with adenoids, enlarged tonsils, or defective septa, when an early operation would have entirely relieved these conditions and would have prevented the consequent deformities.

We must not, however, throw all the blame upon the parents of these children, for many times physicians have told parents that such children outgrow adenoids, enlarged tonsils, etc. This may be literally more or less true, but *they do not outgrow the deformities and deficiencies which develop from the existence of these in early life.* My personal belief is, that an operation should be done for the relief of these conditions as soon as the diagnosis is made, and the sooner the better. I believe that all persons should be given an opportunity to breathe properly through the nose. When we remember, as I have already stated, that 80 per cent of those ready to enter the University are more or less deformed or defective, the seriousness of the situation calls for immediate and radical action.

It is well known that it rarely occurs that a baby is deformed at birth. Their little chests are full and rounded, their lungs are sound, their muscles good, and their hearing and eyesight unimpaired; in fact, they are nearly perfect. They continue normal for the first few years, or until about the time they begin going to school, when the defects of ignorant handling,

*Read before the Crow River Valley Medical Society, April 2, 1911.

improper feeding, and downright carelessness of the parents, begin to be made manifest.

It is at this time, peculiarly, that every care should be taken to develop the lungs, the heart, the stomach, the muscles, the brain, the hearing, and the sight. It is at this age that a physical examination should be given to every child. If any defects exist they should be corrected at once. Such examinations should be made on all children at least twice a year as long as they remain in school.

It is a well-known fact that the backward children, who constitute such a drain upon the public-school system, are backward chiefly because suffering from adenoids, enlarged tonsils, defective eyesight, or defective hearing. All of these conditions can be relieved or prevented if taken in time. I believe that real time and real attention should be given in the schools to the physical conditions of the pupils, more especially in the lower grades, even if it should take up one-quarter of the school time. It is during the growing period of childhood that such physical defects can be remedied best—far better than later in life, when, in fact, it is usually too late to do more than partially relieve what might have been wholly corrected a few years before.

Now, the great question which confronts us is, Under whose jurisdiction shall these physical and medical examinations be made? If we leave it to the school boards, the township boards, or the county commissioners to appoint physicians for medical supervision, the appointments will immediately become matters of political pull, and usually the worst prepared applicant will "get the job." In most of the few instances where this supervision is now carried out in Minnesota, the pay is usually so insignificant, considering the amount of work involved, that a well-qualified physician in practice cannot afford to devote part of his time to doing part of the work on a small scale; nor can comprehensive, efficient work be done thus. Physicians, as a body, should very seriously consider this subject, the most important single subject to the public and to the profession now before the public in health matters.

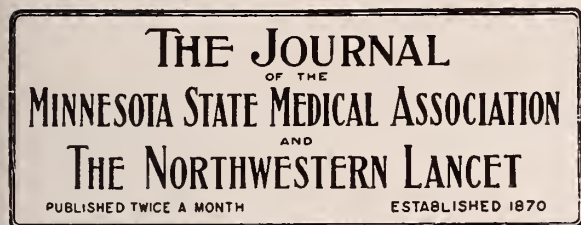
I can think of only one way out of this difficulty, and that will, I am sure, meet at first

with great opposition from the people, who, through their legislators spent \$122,739 in 1910 looking after the wild and domestic animals of the state, and only \$51,000 in taking care of the people of the state. My proposal is to have a first-class physician appointed in every county of the state, or, better, for every 25,000 of the population, at a salary of \$3,500 per year, and have him devote his whole time to the work of medical school-supervision and general public-health supervision. He could soon have every child in the county tabulated, and could see that any abnormal conditions is looked after by the attending physicians.

You will probably notice that I say *appointed* and not *elected*. Here we are up against another hard problem. If the proposed supervisor is elected, we are very likely to get a very incompetent doctor to do this most important work. If the appointment be left to the county commissioners you will find that they are not capable of judging as to the qualifications of the physicians needed for such supervision, and they are more than likely to employ the physician who will do the work for the smallest price. The only appointing power likely to do the proper thing in the proper place, without any reference to politics or graft or fear or favor, is the State Board of Health. It would be well to have the appointees selected by civil-service or equivalent examinations, responsible to the State Board, and located at county-seats. In this way it would cost the State about \$360,000 per year to look after about 1,000,000 children, or about 36 cents apiece.

We know that some work of this kind has been done in the larger cities in the shape of medical school-supervision, but out here in the smaller towns and in the country, where it is most needed, there is almost nothing done, and what little is done is done in spots, without co-ordination or uniformity.

I have called the attention of the gentlemen present to this peculiar condition in the country many times before, and I hope that, if an opportunity offers, they will get into line and help secure legislation favorable to the physical and medical supervision of school children.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR
Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

SEPTEMBER 1, 1911

A UNIVERSAL MEDICAL CONGRESS.

The New York *Evening Post* for Saturday Aug. 19th contained an editorial on "When Doctors Disagree." It commented on a recent discussion on fumigation in which Health Officer Doty and the Dean of the Medical College of New York University gave their opinions on the value of methods of fumigation, its uses and abuses, and it also commented on a quotation, or a misquotation, from Doctor Osler, who maintained that, with the exception of two drugs, mercury and castor oil, our entire pharmacopœia might as well be pitched overboard. The editorial also cited many instances when doctors exploded many old-time pet theories and left the public wondering who was right and who was wrong.

The public gleans much of its medical knowledge from the lay press, which is more or less unreliable, misleading, and sensational. The editorial suggested that "the science and practice of medicine are being severely manhandled in the house of its friends. More destructive than the assaults of revolutionaries, Christian Scientists, and New Thought practitioners are the startling denials emanating from, or attributed to, well-known men within the profession."

There is much truth in the criticism, and it is about time that a general medical press bureau was established to give the public some plain

common-sense information on simple medical topics. It is conceded that many medical beliefs have changed with the rapid progress made in the medical field. New discoveries have cleared the atmosphere, but the public do not know why or how it is possible for the physician to alter his views or the views of his fathers. Perhaps the new factors in medicine are responsible for the uprising of new cults, movements, and fads. Presumably those who have suffered disappointments when they thought relief was at hand have joined in or promoted their own unworked-out schemes to furnish new means of cure.

There is no doubt that many of the mild or aggressive paranoiacs who have joined their forces temporarily, are more or less responsible for the unrest among the unthinking or indifferent classes and for their opposition to medical progress. The fact remains that the people need instruction and information that will help them in the care of themselves and their families.

The medical profession is too secretive at times, and even if they wanted to diffuse their knowledge the only medium is through the medical press. This of course rarely reaches the eye of the public. A few newspapers are honestly trying to supply their readers with scientific matter. Unhappily, some of the papers that print health hints in their Sunday magazine supplements are not over-particular as to the accuracy of their articles.

The *Post* suggests that a list of plain questions set down in plain terms would show how expert opinions may be divided on important questions, yet, in spite of dissenters and heretics, the public would be better off than they are now. The people want to know if vaccination is desirable? Will cleanliness prevent the transmission of disease? What is the case for vaccines and the serums? What about food, alcohol, tobacco, sleep, exercise? What about exertion and fatigue? These questions have all been answered by representative medical men in many newspapers, but the information does not reach far enough. Medical controversies on simple matters should be without acrid comment and in the spirit of helpfulness, constructive, rather than destructive. The majority of the people are willing to listen to fair-minded arguments, but the difficulty lies in the limitless discussions by inexperienced directors or friends of schools who have theories and no facts to present. The medical profession does not claim

definite conclusions on all points; they are willing to admit that there are many things they do not know. The new schools attempt to be positive and unyielding in most questions that pertain to matters of public health.

A general conference of representatives of all schools might be gotten together, and the best men might discuss many questions that are of prime importance and leave hair-splitting theories to fledgling theorists. The average reporter selects the sensational or what he believes to be the most striking or startling statements for his text, and because he does not understand the fundamentals in medicine he headlines the unimportant. On the other hand, the public speaker or writer often speaks or writes on impulse, and thus misinformation is spread. Simple language stating facts based on well-earned experience and on subjects the lay mind can grasp, is the best form for publication. If the people can be taught how to avoid disease, the doctor's mission is fulfilled. The faddist, the theorist, and the obstructionist care but little for the welfare of the public.

THE OPENING OF THE NEW UNIVERSITY HOSPITAL

The dedication ceremonies of the Elliot Memorial Hospital will take place on the Campus Tuesday, September 5th. Although the University Medical Department has operated and maintained hospital buildings for more than two years, the opening of this new building marks a new era in the life of the Medical Department of the University of Minnesota. The fund which furnished the nucleus of the future hospital buildings was derived from the estate of Dr. A. F. Elliot, an old resident of Minneapolis, who, although an Eclectic, was interested in medicine in its broad sense. The estate passed to Dr. Elliot's wife and after her death was administered by Mr. Trask, an old friend of the Elliots and of the University. He saw the necessity of further aids to medical education, and particularly the need of clinical teaching, and it was mainly through Mr. Trask that the sum of one hundred and twenty thousand dollars was given over to the Board of Regents for a hospital building. A few public-spirited citizens subscribed the sum of forty-seven thousand dollars to furnish a site for the new hospital building, and the legislature appropriated

forty thousand dollars to build the modern building which now marks the high point on the new University Campus, overlooking the Mississippi River. The building, which is soon to be dedicated, will house a portion of the needy sick poor of the state until other pavilions are added.

THE JOURNAL-LANCET has often explained the purpose of this new teaching building, but, for fear of some misunderstanding, it may be repeated that the University hospital buildings are intended to offer a temporary home for the poor from any part of the state. No charge is made for hospital care, and no charge can be made by physicians who are on the staff of the hospital. The Superintendent, Dr. Baldwin, will furnish application-blanks for admission into the hospital. Emergency admissions may be obtained by telephone or telegraph, but the usual admission must go through the prescribed forms. Any poor person in any county in the state may avail himself of the opportunities offered, and it is the wish of the Regents and the medical faculty that patients from distant points where the proper facilities cannot be secured will come to the hospital for care and treatment. The few stipulations required for admission are not burdensome. The applicant must have transportation in hand to and from the hospital. His financial poverty must be certified by his physician and the supervisor of his county. He must be a suitable case, that is, he must be free from any so-called communicable disease, such as the various epidemic disorders that ordinarily prevail.

It is expected that the Alumni of the University will take an active interest in the service of the hospital and keep it full of teaching material. It is further hoped that physicians will impress upon the people that the hospital will be managed on ethical lines, and the first aim of the faculty and staff will be modern treatment of the illness, medical or surgical.

The advantages to the patient are evident when one considers that the poor will have a thoroughly equipped hospital where their condition can be carefully observed and studied. The opportunities for operation by medical students will be conducted in the most careful manner, so that no objections from any source may arise.

As the opening of the hospital occurs during State Fair week a large attendance of outside physicians is expected.

DEATH OF DR. JEHIEL TUTTLE MOORE

The State of Minnesota is under many obligations to Dr. J. T. Moore who died in Minneapolis on August 19th. He was the first, or at least among the first, of the medical men in Minnesota who paved the way for higher medical education in this state. He saw very early that there was much to be done for the protection and advancement of medical men, and, in his quiet but insistent manner, he saw that his ideas were carried out.

Dr. Moore allied himself with the Medical Department of Hamline University and was its most active dean for many years, and when the Hamline Medical School decided to merge with the State University medical department, Dr. Moore cordially and heartily urged the alliance.

As a teacher Dr. Moore was successful, and many of the medical men in Minnesota will remember his kindly advice and instruction.

Of late, Dr. Moore has not been physically equal to hard work, but he maintained his office practice until within two days of his death. His special attention was given to internal medicine, and his special hobby was rational therapeutics.

Dr. Moore left a large circle of lay and medical friends, who will sorely miss him.

On account of the similarity of names and the difference of but one initial, much confusion has frequently arisen between the two Dr. Moores of Minneapolis. Dr. J. E. Moore, the present active professor of Surgery in the Medical Department of the University, is still with us, and we hope will be with us for many years to come. Let no one think that Dr. J. E. Moore is the one whose death we are called upon to mourn.

CORRESPONDENCE

DUKE'S DISEASE

Willmar, Minn., Aug. 10, 1911.

TO THE EDITOR:

On April 28, 1911, I was called to Pennock to N.'s family to see a severe case of so-called scarlet rash. The patient, Miss Olga N., about 13 years of age, had what, on first sight, appeared to be a typical case of genuine scarlet fever. On inquiry I was informed that all the children in the village of Pennock had had, or

were having, the disease, and that for a couple of weeks back there had been children with the rash in school every day. I investigated several of these cases and found a typical scarlet-fever rash, but otherwise mild general symptoms, very light adenitis, and throat soreness, but no desquamation. In a few of these cases, especially in older persons, 20 years of age and over, there was arthritis of some of the larger joints. I was somewhat in doubt about the diagnosis, but, considering the general prevalence and the mildness of the cases, I did not quarantine these cases, but ordered the village authorities to be on the lookout for severe cases and report to me promptly.

I heard nothing further until May 19, when I was called to the family of George A., and there found cases of genuine scarlet fever. *The children of the family had all had the so-called scarlet rash some four weeks before.* Now they had, in turn, severe scarlet fever, with typical rash, sore throat, adenitis, and desquamation. A child of 2 or 3 years of age died from a severe form of infection in less than two days of sickness, and in fact before the parents realized that the child was seriously sick.

There is no doubt that the first-named disease in this locality was Duke's disease, called by people "scarlet rash," but really scarlatiniform German measles.

I have often told people that there is no such thing as scarlet rash; that scarlet rash is a mild form of scarlet fever, but I now know better. Scarlet rash is Duke's disease and does not protect against scarlet fever.

CHRISTIAN JOHNSON, M. D.

Dr. H. W. Hill, an epidemiologist of the Minnesota State Board of Health, contributed to our issue of July 15th a valuable and timely article on this subject, in which he clearly pointed out the distinctions among scarlet fever, measles proper, German measles, and Duke's disease, stating that the latter is, so far as present evidence goes, merely German measles, in which the rash takes the scarlet fever rather than the measles type.

Dr. Johnson's communication furnishes some evidence from Minnesota on the existence of Duke's disease and on its non-identity with scarlet fever. Perhaps other physicians have observations worth recording on this, as yet, rather obscure question. The diagnosis between Duke's disease and scarlet fever is a most important one. Scarlet fever, mild at first, may

become, as an epidemic goes on, more and more severe, while true Duke's disease will, if current teaching be correct, "breed true," and therefore remain practically innocuous. The final proof that our correspondent was dealing in April with Duke's disease, and not with mild scarlet fever, lies in the record of scarlet fever developing in May in some of those who had already and recently suffered from the other disease. Dr. Johnson's conclusion that "scarlet rash" is really Duke's disease indicates his personally correct view of the proper use of the term; but, unfortunately, the so-called "scarlet rash" too often is really mild scarlet fever, just as "chicken-pox" is too often really mild small-pox.—THE EDITOR.

HAY FEVER.

Minneapolis, Aug. 10, 1911.

TO THE EDITOR:

This is the hay fever season, and the following quotations from Dr. Reik's book upon the ear, nose, and throat, just published, will be of interest and instructive to readers.

In THE JOURNAL-LANCET for Aug. 15, 1908, the writer published an article calling attention to some of these facts, and especially emphasizing the fact that hay fever is not of nervous origin, despite the fact that the toxalbumen causing the disease gives rise to various nervous symptoms.

Until the profession has succeeded in eliminating from its literature, and in forgetting, some of the old fallacies concerning this disease, a few repetitions of these statements will be necessary.

Nowhere have I seen them as well expressed as in this book; however, your space will permit only a short quotation, and it will pay anyone to read the entire chapter.

There is scarcely any other in the whole category of diseases that has been so poorly understood, or misunderstood, as this one. While there have been many peculiar and conflicting elements in its consideration, the attitude of the profession toward its proper study has been little short of disgraceful. Simply because a few of the victims have been persons of a recognized neurotic temperament, and because treatment of the affection has pretty thoroughly baffled the profession, the inclination has been to dispose of it by casting it upon medicine's rubbish-heap—neurasthenia. And this in spite of the fact that the cause of the disease was discovered long ago, and its mode of action clearly established. Blackley, as far back as 1873, proved most conclusively the specific

relationship between the prevalence of certain plant pollens in the atmosphere and the periodic recurrence of the hay-fever epidemic. His work received scant attention, however, although pollen had been, for many years prior to his time, suspected as a causative factor, and even now, when Dunbar, by a magnificent series of scientific experiments, has proved the correctness of every statement made by Blackley and adds most convincing evidence to show not only that pollen is the cause of hay fever, but that it is the sole cause, a large percentage of the profession either ignores the facts or adopts an attitude of unreasoning skepticism. Unfortunately, the blame for this state of affairs rests where it would be least expected—upon the specialists in diseases of the nose. With mental vision obscured by the haze of neurasthenia and with preconceived notions as to the necessity for finding some distinctive abnormality in the nose of hay-fever patients, the rhinologist has continued either to treat the whole subject derisively or to search in vain for some unrecognized nasal lesion, long after the botanist and the pathologist have scientifically solved the problem by isolating the poison, and showing the disease to be a distinctive toxemia.

Let us fix two things firmly in mind: *First*, hay fever is *not* a neurosis, in the sense in which that term is ordinarily used; *secondly*, it is a *complete disease entity*, having its own distinct characteristics, due to a known specific toxine. It is just as clearly a recognizable disease as is diphtheria, is just as truly caused by a specific toxic agent, as the latter disease is caused by a specific micro-organism, and as it seems to be growing rather more prevalent, and increasing the number of its victims each year, it is certainly a matter deserving of greater consideration, both from the family physician and the rhinologist.

Etiology.—It has been proven that the exciting cause of hay fever is the presence of the pollen of flowering grasses, grains, or weeds in the atmosphere, and that the mildness or severity of the malady corresponds with the varying amount of pollen in the air at any given time. Dr. Dunbar has succeeded in isolating from the pollen that particular active principle which occasions all the trouble. This precipitate showed all the reactions of albumen and proved to be active to hay-fever patients in quantities as small as 1-40,000 mg. Regarding the character and mode of action, Dunbar says: "It was difficult to accept the view that a well-characterized albumen represented the poison of hay fever. It appeared too new and startling that a chemically pure albumen, perfectly indifferent in its action to most persons, should be for certain individuals such an extraordinarily active poison. Even now no analogy presents itself to my knowledge. It seemed possible that an enzyme action might enter into the question. In pollen there are various enzymes, but by chance it was ascertained that grass pollen can completely lose its toxicity without the slightest damage to its enzymes. The recent researches of Kammann on the albumen of grass pollen show that the pollen globules are totally inactive, and that the toxine is attached to the albumen. Pollen toxine is, therefore, a *toxalbumen*."

Respectfully,

FRANK C. TODD, M. D.

MISCELLANY

PROGRAM OF THE ANNUAL MEETING OF THE MINNESOTA STATE MEDICAL ASSOCIATION, OCTOBER 5 AND 6, 1911

ST. PAUL

THURSDAY, OCTOBER 5TH, 9:00 A. M.

1. Address of Welcome Hon. Mayor H. Keller, St. Paul
2. Address Hon. Gov. A. O. Eberhart
3. President's Address Dr. J. W. Robertson, Litchfield
4. Symposium—Syphilis:
 - a. Laboratory Methods in Syphilis
Dr. N. L. Linneman, Duluth
 - b. Arsenic Therapy in the Treatment of Syphilis
Dr. C. D. Freeman, St. Paul
 - c. The Contribution of the Spinal Fluid in the Diagnosis of Syphilis of the Nervous System
Dr. C. R. Ball, St. Paul

Discussion opened by
Dr. R. H. Mullen, Minneapolis
Dr. F. Wright, Minneapolis
Dr. B. Foster, St. Paul
Dr. A. S. Hamilton, Minneapolis
Dr. A. W. Dunning, St. Paul
5. Abdominal Pain: Some Aspects Relating to Diagnosis,
Dr. A. T. Mann, Minneapolis

Discussion opened by
Dr. J. E. Moore, Minneapolis
Dr. J. L. Rothrock, St. Paul

6. Imperforate Anus, Dr. A. A. Law, Minneapolis

Discussion opened by
Dr. W. A. Dennis, St. Paul
Dr. E. A. Hare, Minneapolis

THURSDAY, OCTOBER 5TH, 2:00 P. M.

1. Oration on Surgery: Deformities of the Neck
Dr. E. H. Beckman, Rochester
2. Symposium: Carcinoma of the Alimentary Tract:
 - a. Carcinoma of the Lip, Mouth and Pharynx
Dr. E. H. Beckman, Rochester
 - b. Esophageal Obstructions, with Especial Reference to Carcinoma
Dr. H. L. Plummer, Rochester
 - c. Carcinoma of the Gastro-Intestinal Tract
Dr. W. J. Mayo, Rochester

Discussion opened by
Dr. J. E. Moore, Minneapolis
Dr. A. MacLaren, St. Paul
Dr. A. Schwyzer, St. Paul
Dr. J. C. Stewart, Minneapolis
3. Visceroptosis
Dr. L. R. Crummer, Omaha, Honor Guest

Discussion opened by
Dr. T. W. Stumm, St. Paul
Dr. T. Bratrud, Warren

4. Spondylitis Deformans
Dr. C. A. Reed, Minneapolis

Discussion opened by
Dr. A. J. Gillette, St. Paul
Dr. E. S. Geist, Minneapolis

5. Cystic Degeneration of the Kidneys
Dr. Donald Balfour, Rochester

Discussion opened by
Dr. A. A. Law, Minneapolis
Dr. W. F. Braasch, Rochester

THURSDAY, OCTOBER 5TH, 7:30 TO 9:15 P. M.

(Papers with lantern-slide demonstration)

1. X-ray in Fractures
Dr. W. S. Fullerton, St. Paul

Discussion opened by
Dr. J. H. Selby, Rochester

2. Some Malformations of the Female Genitalia
Dr. F. L. Adair, Minneapolis

Discussion opened by
Dr. A. W. Abbott, Minneapolis
Dr. J. L. Rothrock, St. Paul

3. Sporotrichosis in North Dakota
Dr. G. F. Ruediger, Grand Forks, N. D., and
Dr. Miller, Grand Forks, N. D.

Discussion opened by
Dr. H. W. Hill, Minneapolis
Dr. H. P. Ritchie, St. Paul

4. Important Practical Uses for Roentgen Methods in Diagnosis
Dr. J. H. Selby, Rochester

Discussion opened by
Dr. F. S. Bissell, Minneapolis

FRIDAY, OCTOBER 6TH, 9:00 A. M.

1. Oration on Medicine: When Should Gastric and Duodenal Ulcer be Treated Surgically and When Medically?
Dr. Bertran Syppy, Chicago
2. Multiple Myelomata
Dr. T. W. Stumm, St. Paul

Discussion opened by
Dr. S. M. White, Minneapolis
Dr. W. D. Sheldon, Minneapolis

3. The University Hospital
Dr. C. L. Greene, St. Paul

Discussion opened by
Dr. R. O. Beard, Minneapolis
Dr. F. F. Westbrook, Minneapolis

4. The General Practitioner
Dr. Christian Johnson, Willmar

Discussion opened by
Dr. C. J. Hunter, Minneapolis
Dr. J. W. Robertson, Litchfield

5. The Requirements of the Modern Medical Examination for Life Insurance
Dr. H. W. Cook, Minneapolis

Discussion opened by
Dr. L. G. Cross, Minneapolis
Dr. C. N. McCloud, St. Paul

6. Casein Milk: Its Technic and Indication for Its Use
Dr. F. W. Schlutz, Minneapolis

Discussion opened by
Dr. J. P. Sedgwick, Minneapolis
Dr. Walter Ramsey, St. Paul

FRIDAY, OCTOBER 6TH, 2:00 P. M.

1. Tuberculin in the Treatment of Scleritis
Dr. C. N. Spratt, Minneapolis

Discussion opened by
Dr. E. Boeckman, St. Paul
Dr. J. S. Macnie, Minneapolis

2. The Indian Method of Cataract Extraction and the Smith Operation
Dr. J. C. Harding, St. Paul

Discussion opened by
Dr. F. Todd, Minneapolis
Dr. J. M. Robinson, Duluth

3. The Surgical Treatment of Diverticula of the Urinary Bladder, with Report of a Case and a New Device Facilitating the Operation
Dr. W. Lerche, St. Paul

Discussion opened by
Dr. J. M. Armstrong, St. Paul
Dr. F. S. Cook, St. Paul

4. Abdominal Contusions, with Report of Cases
Dr. J. C. Holman, Mankato

Discussion opened by
Dr. J. Quinn, St. Paul
Dr. R. E. Farr, Minneapolis

5. Symposium: Fractures:
 - a. X-ray in Fractures
Dr. W. S. Fullerton, St. Paul
(See evening meeting)
 - b. Fractures of the Elbow
Dr. O. W. Parker, Ely

Discussion opened by
Dr. O. T. Sherping, Minneapolis

 - c. Fractures of the Wrist
Dr. A. E. Wilcox, Minneapolis

Discussion opened by
Dr. A. E. Colvin, St. Paul

 - d. Fractures of the Patella
Dr. W. E. Harwood, Eveleth

Discussion opened by
Dr. W. H. Magie, Duluth
Dr. C. B. Lenont, Virginia

 - e. Compound Fractures
Dr. B. S. Adams, Hibbing

Discussion opened by
Dr. W. E. Rockford, Minneapolis
Dr. C. W. Bray, Biwabik

REPORTS OF SOCIETIES

THE WATERTOWN (S. D.) DISTRICT MEDICAL SOCIETY

The Watertown District Medical Society met in a regular session at the Commercial Club rooms on August 8th, at 3 p. m. The following were in attendance: Drs. O'Toole, Leech, Parsons, Dickinson, Hill, Sherwood, O'Bryan, Freeburg, Bartroon, and Vaughn.

The usual routine of business was transacted. Dr. J. S. Bates, of Clear Lake, was elected to membership.

Dr. C. S. O'Toole presented a paper on "Some Obstacles in the Practice of Obstetrics."

Dr. J. B. Vaughn presented a paper upon "The Management of Labor, with Every-day Complications; the First, Second, and Third Stages."

A general discussion followed each paper.

The Society adjourned to the Kampeskia Hotel for a six-o'clock dinner.

J. B. VAUGHN, M. D., Secretary.

THE CLAY-BECKER SOCIETY

Our midsummer meeting is an annual outing meeting, no papers being read or general business transacted at such meetings.

This year the outing meeting was held July 31st, at the Detroit Lake. We had a boat ride down the lake, with a dinner at Shoreham, on Lake Melissa.

E. R. BARTON, M. D., Secretary.

CAMP RELEASE DISTRICT SOCIETY

The Society met at Redwood Falls in July, with seventeen members present.

Dr. L. J. Holmberg, of Canby, was elected to membership. Drs. G. R. Pease, C. P. Gibson, A. G. Chadbourn, and T. E. Flinn, of Redwood Falls, and Dr. F. H. Aldrich, of Bellevue, transferred their membership from the Brown-Redwood Society to this Society.

Papers were read as follows: "Post-partum Hemorrhage," by Dr. M. H. Marken, of Dawson; "The Relation of Gastric Atony to the Neurasthenic State," by Dr. H. P. Ritchie, of St. Paul.

Dr. W. M. Beck, of Hanley Falls, gave a recitation, entitled "The Cremation of Sam McGee."

In the evening an open meeting was held at the Presbyterian church, where Dr. Charles Lyman Greene, of St. Paul, gave an address on "The Training of the Modern Physician and Its Relation to the Public Welfare" to a large and appreciative audience. The address was illustrated with the stereopticon.

A resolution was passed indorsing Dr. Wiley and his work.

The next meeting will be held at Olivia, on October 26th.

R. D. ZIMBECK, M. D., Secretary.

SOUTHWESTERN MEDICAL SOCIETY

The Society held its regular summer meeting at Pipestone on August 10th. Twenty members and four visitors were present.

The program was as follows. "Vaginal Hysterectomy under Quinine and Urea Hydrochloride Anesthesia," Dr. J. H. Dudley, Windom; "Puerperal Eclampsia, with Report of Cases," Dr. A. H. Brown, Pipestone; "Prophylaxis in Contagious Diseases," Dr. Geo. D. Rice, Pipestone; "Sudden Death after Labor; Case Report," Dr. Emil King, Fulda; "Foreign Body (glass) in Sigmoid Flexure, Causing Death, Case Report," Dr. C. P. Dolan, Worthington.

All papers were thoroughly discussed by members and visitors.

The following were elected to membership: Dr. C. C. Allen, Pipestone; Dr. P. J. Cress, Ellsworth; Dr. Henry A. Schmidt, Westbrook; Dr. Henry C. Doms, Holland; Dr. P. R. Fulton, Brewster.

Dr. J. H. Leebens was elected as alternate in the place of Dr. Ray Humiston, deceased.

Our delegate and alternate were instructed to assist the House at the coming meeting in maintaining the present relations with the management of THE JOURNAL-LANCET.

Resolutions were passed favoring the retention of Dr. Harvey W. Wiley in the public service, said resolutions to be sent to President Taft and others.

Following the meeting a banquet given by the local profession, including the pharmacists, was served.

EMIL KING, M. D.

Secretary.

NEWS ITEMS

The hospital at Marshall has opened a training-class for nurses.

Dr. G. H. Richards has moved from Underwood, S. D., to Chamberlain, S. D.

Dr. Lillian G. Miller is at the head of a movement for a hospital for Hamilton, Mont.

Dr. E. A. Johnson, of Alhambra Springs, Montana, is doing post-graduate work in New York.

Dr. O. E. Belcourt has returned to Argyle to resume practice, given up ten years ago to go to Canada.

Dr. James Fair, a physician of high standing in the early days of Minnesota, died last month at Paynesville.

Dr. Guy Grafton, of Hayward, Wis., died on August 10th from injuries received in an automobile accident.

Dr. D. L. Tilderquist, of Duluth, has returned from Europe, after a year's absence, where he has been doing special work.

The Northern Minnesota Hospital Association has completed its hospital at Crosby, and the building is now occupied.

Dr. William Muench, one of the pioneer physicians of the Dakotas, died last month at Linton, N. D., at the age of 59.

Dr. Harry G. Wood, of Faribault, has resumed his practice after spending several months in post-graduate work at McGill.

Dr. J. B. Atchison, a pioneer physician of Montana, died at Lewistown, Mont., last month. He formerly practiced in Helena.

The fifth annual meeting of the Minneapolis, St. Paul & Sault Ste. Marie Railway Surgical Association will be held at the Blackstone, Chicago, October 16 and 17, 1911.

Dr. H. J. Shelver, who recently gave up practice at Shakopee, has located at Appleton. Dr. Shelver and Dr. W. C. Kaufman have purchased the practice of Dr. Finn Koren at that place.

Dr. O. O. Benson, of Sacred Heart, has been appointed superintendent and physician of the Vermillion Lake Industrial School for Indians, and will take up the duties of the position at once.

Dr. Paul Remington, a recent graduate, who has been doing hospital work in St. Paul, has

been appointed second assistant physician in the Northern Pacific Railway Hospital at Missoula, Mont.

Dr. A. F. Pringle, of Northfield, who is studying in Europe, was run down by a cab in London and had his arm broken. He was confined to the hospital for three weeks. He will return the last of this month.

Dr. Wm. N. Welch, of Johns Hopkins, visited the University last month on his way home from the Los Angeles meeting. He will be back again next month to attend the inauguration of President Vincent.

Drs. Class, Sprague, Taylor, Thomas, and Wood, of Huron, S. D., have formed a partnership and started a new hospital to succeed the Sprague and Wood Hospital. The new hospital will be called the Huron Hospital.

Dr. O. H. Wolner, who recently resigned his position at the State Reformatory at St. Cloud, and went to Colorado to locate, has returned, and will probably locate in North Dakota. Dr. Wolner was not satisfied with Colorado.

Dr. W. M. Hart, of Duluth, has resigned his position as secretary of the St. Louis County Sanitarium Commission, and has taken charge of the antituberculosis work carried on by the Province of Saskatchewan, with residence at Regina.

Dr. Timothy O'Brien has just completed a handsome hospital building at Wahpeton, N. D. It will accommodate twenty patients. It is equipped with practically all modern hospital appliances, and is thoroughly appreciated by the citizens of Wahpeton and the neighboring towns.

The corner-stones of the new Millard Hall and the Institute of Anatomy at the State University were laid last month without formal exercises because of the nearness of the dedication of the Elliot Hospital and the inaugural service of the president. The old Millard Hall is given to the College of Pharmacy.

A moderate bill of an x-ray expert at Duluth was questioned, and the matter carried into court. The bill made the charge for "examination and diagnosis." The lawyer for the patient claimed that no request was made for a diagnosis; it was only for an examination. The court allowed the bill.

The German Lutherans of Minnesota and Missouri have opened a hospital on Hoffman avenue and Seventh street, St. Paul, using temporarily a remodeled residence, which will be-

come the nurses' home when the larger hospital building is erected. Dr. F. J. Plondke, of St. Paul, is the medical director of the new St. John's Hospital.

The new medical-practice act of North Dakota is having its second try-out in an action against Dr. F. X. Offerman, at Minot, for practicing without a license. These continued, and often fruitless, efforts of the people to pass for self-protection laws that will stand the test of the courts, will some day be classed among the curiosities of our national development.

The last Minnesota legislature passed one admirable law, which permits county commissioners to pay, in full or in part, the expenses of visiting nurses to give instruction in the homes of consumptives. Dr. G. S. Wattam, of Warren, a member of the House, took an active part in this legislation. Four counties are now working under this law, namely, Marshall, Stevens, Todd, and Kandiyohi.

Dr. Jehiel Tuttle Moore, of Minneapolis, died on August 19th at the age of 63. Dr. Moore graduated from McGill in 1874, and came to Minneapolis in 1882. Dr. Moore had been prominent in medical circles, both in the state and county, ever since he came to Minneapolis, and he leaves an honorable record of achievement. A more extended notice of his life appears in our editorial columns.

Dr. H. E. French, Professor of Anatomy in the Medical Department of the University of South Dakota, has been appointed dean of the Medical Department of the University of North Dakota, succeeding Dr. M. A. Brannon, who takes up work in the College of Liberal Arts. Dr. French is a graduate in medicine from the Northwestern University, and took his M. S. degree from the University of Chicago.

PHYSICIANS LICENSED AT THE JULY (1911) EXAMINATION TO PRACTICE IN NORTH DAKOTA

UPON EXAMINATION

Barbour, H. W. Barnes Medical, 1899
Bay, W. F. Ohio Medical, 1894
Buzell, C. P. U. of Vermont, 1892
Clark, Horace Harvard, 1888
Crary, G. H. Michigan, 1906
Earl, H. D. Keokuk, 1906
Farrage, James U. of Louisville, 1911
Julian, E. A. Northwestern, 1911
Kjelland, A. A. U. of Minnesota, 1910
McCarten, K. E. Jefferson, 1910

Meigs, B. L. U. of Iowa, 1902
Murray, K. M. U. of Toronto, 1909
Neff, E. A. Chicago Physio-Medical, 1896
Quinn, R. J. Creighton, 1911
Ramsey, T. B. Western Med. Col., 1910
Smith, A. N. Northwestern, 1911
Stucke, A. G. Women's Med., Phila., 1910
Sturgeon, F. H. Hamline, 1903

BY RECIPROCTY

Abbott, J. G. Jefferson, 1905
Barbour, W. L. U. of Vermont, 1908
Belanger, G. L. Laval, 1905
Derdiger, L. B. P. & S., Chicago, 1910
Evsbank, J. N. Hahnemann, Chicago, 1910
Gans, E. M. U. of Minnesota, 1905
Heron, Roy C. Hamline, 1908
Hill, S. W. U. of Maryland, 1909
Krieger, H. A. Bennet, 1909
Monteith, G. Marquette University, 1910
Olson, G. M. U. of Minnesota, 1904
Wylie, A. R. T. U. of Minnesota, 1906

ASSISTANT WANTED

An assistant on salary is wanted for general country practice. Give age, previous experience, nationality, and whether married or single. Address G. G., care of this office.

PRACTICE AND DRUG-STOCK FOR SALE

My medical practice and small drug-stock are offered for sale. In county town 170 miles from Twin Cities; competition 10 and 20 miles away. A money-maker for the right party. Must sell because of sickness. Address H. E., care of this office.

PRACTICE FOR SALE.

Physician's practice in one of the best smaller towns in Minnesota, in the midst of a good agricultural community in the famous Park Region. A summer-resort with good hunting and fishing for recreation. Practice runs \$3,000 and better per year in cash. Good collections. Will sell practice, dwelling (two large lots), and some office equipment for \$2,200. An exceptional opening for a capable man. Address T. O., care of this office.

CITY PRACTICE FOR SALE

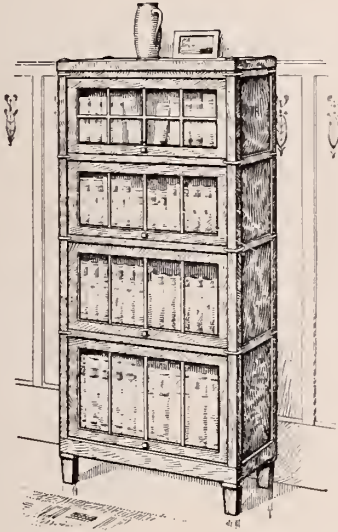
The practice of the late Dr. J. T. Moore, of Minneapolis, with office fixtures, instruments, static machine, drugs, etc., is for sale cheap. Dr. Moore's work included a large office and prescription practice, much of which can be held by his successor, as can much of his family practice. For particulars address Mrs. Francis Moore, 405 Masonic Temple, Minneapolis.

FINSEN LIGHT OUTFIT FOR SALE

My outfit cost \$3,500; can be bought for mere fraction of value owing to death of owner: in use until recently and in perfect order; fine opportunity for physician wishing to take up treatment of skin diseases; also large static machine for generating electricity. The Finance Company of Minnesota, 633 Andrus Bldg.

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SIMPLE elegance and utility are the key-notes of this "Macey" Artcraft Sectional Bookcase. The plain surfaces, simple lines, correct proportions and, withal, harmony of design, make it beautiful and without superfluous ornamentation.

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WE carry a complete line of "Macey" cases in all the prevailing styles and shall be pleased to send booklet explaining the many advantages of these modern Bookcases.

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PUBLISHER'S DEPARTMENT

A PURE WATER.

After excellent opportunities, extending over many years, we believe we can say that the Sandstone Spring Water Company of Minneapolis brings to the Twin Cities and ships to the country the best drinking water in the Northwest. The water comes from the deep sandstone of Minnesota, and the method of handling it cannot be improved upon. There is not one unsanitary step in the whole process of taking out of the ground and placing it in the hands of the consumer.

For further information, address the Sandstone Spring Water Co., Minneapolis.

OCONOMOWOC HEALTH RESORT

The states of Wisconsin and Minnesota have the most beautiful sites and, in many respects, the best climatic conditions for sanitariums and health resorts in the United States. The medical men of Minneapolis have been slow to recognize this fact, and to build up institutions of this kind, while Wisconsin has scores of them. As a result Wisconsin men have made national reputations by their work in nervous and mental diseases, and both the profession and the public of the state have been benefited thereby.

One of the leading resorts of this character is that of Dr. Arthur W. Rogers at Oconomowoc, Wis. The new building is a model, the location is ideal, and Dr. Rogers is a recognized authority in both professional and institutional work. Many of our readers know of the institution's work and high standing, but only those who have sent patients to Dr. Rogers can appreciate the satisfaction given both the patients and their family physicians.

"SIX DAILY TRAINS" BETWEEN THE TWIN CITIES AND CHICAGO

The American people make one insistent demand from all who serve them, and that demand is for the best: and no appeal of an advertiser is quite so strong as a fortified claim that he offers the best, thus "99% pure" is a characteristically strong American advertisement, even though proof of the fact be lacking. How much better story the simple statement above makes! A half dozen roads run daily trains—and indeed fine ones—between these cities, yet the Milwaukee Line runs six daily trains each way to take care of its patronage.

We asked a gentleman one day why he always took "The Pioneer Limited" when going to Chicago. His answer was, "Because I meet all the business men on that train." All the business men "cannot be fooled all the time." This tells the story.

THE RETURN FROM THE COUNTRY

Almost every city family, whose exchequer will permit, is accustomed to spend a goodly portion of the heated term away from home. This is both natural and salutary, provided good judgment is exercised in the selection of the country place or summer resort, as regards its general healthfulness and sanitary environment. Unfortunately, sanitation on farms and in rural

communities is not always what it should be, and the result is that many health and pleasure seekers return in the autumn depressed and run down or perhaps infected with malarial or typhoidal poison. In other cases, especially at crowded fashionable resorts, because of the continual round of exciting amusements, some are tired and fagged out instead of rejuvenated as the result of their summer's outing. Many are certainly in need of that general constitutional reconstruction and building up of force and resistance which is necessary to withstand the business or social strain of the fall and winter. In such cases there is no one single remedy quite as dependable as Pepto-Mangan (Gude). It increases appetite, restores strength and general vitality, reinforces the hemoglobin content of the blood, and acts as a prompt and efficient general tonic and reconstituent for patients of all ages.

THE STORM BINDER AND ABDOMINAL SUPPORTER

The problem of securing a proper and efficient abdominal support during pregnancy and after confinement as well as after laparotomies is an important one, and has in recent years been extended considerably, since the importance of relieving all varieties of enteroptosis by mechanical support has been realized. The treatment of enteroptosis, of floating kidney and even of cholelithiasis (according to Achilles Rose) by a well fitting abdominal support has been successful in a large number of cases. It is, however, indispensable that the support should not only be properly adjusted and should hold the prolapsed viscera in place, but it must also be free from discomfort, it must be washable, durable in quality and moderate in price.

All these requirements are unusually well met in the Binder and Abdominal Supporter made in many varieties and for all conceivable purposes by Katherine L. Storm, M. D., 1612 Diamond St., Philadelphia, Pa., who has made a remarkably successful study of the problem and has solved it to the complete satisfaction, not only of the physicians and surgeons ordering the "Storm Binders," but also of their patients, which after all is the important point. Better write to Dr. Storm, Doctor, and find out about her binders for that neurasthenic patient of yours whose abdominal walls are relaxed and permit the viscera to drag down.—Clinical Medicine, July, 1911.

THE POTTENGER SANATORIUM

A well-known Minneapolis surgeon some months ago was looking for the best place to send a tuberculous brother, and he sent him to Dr. Pottenger's Sanatorium at Monrovia, California, less than an hour's ride from Los Angeles. We asked this surgeon what he

thought of Dr. Pottenger's institution. He said it is just what you would expect from a man of Dr. Pottenger's high attainments and reputation in his specialty; it is ideal.

This is, indeed high praise, but we believe it to be well deserved. We are pleased to carry the card of such an institution in our advertising pages.

SUMMER DIETETICS FOR CHILDREN

It is not necessary to inform the well-read readers of Physiologic Therapeutics that the study of the dietetic care of infants and small children deserves an increased impetus during the summer months, for the frequency and prevalence of diarrheal intestinal disturbances in children is tremendous during this time.

The purpose of this brief is not to emphasize the importance of having good milk. That is already known. We would suggest that the importance of the addition of Barley Flour to the food of these children be given more attention.

For many years the profession has imported Barley Flours from England. Undoubtedly, they were good, or else they would not have been imported. But now comes a Minnesota miller with a barley flour which is well ahead of any other on the market, and because of this, the matter is deserving of mention. We have excellent reasons for believing that the routine addition of barley flour to the food of infants during the summer will regulate the bowels and prevent the all-too-common diarrhea, and at the same time work wonders with the little ones in a way that is not easily surpassed.

More of the profession should look into the possibilities of the use of this food than they are at present doing. Let us here emphasize that we feel that it is just as proper to call the attention of our readers to a good thing that happens to be sold by somebody, as it is to discuss the skill of an individual who has his services for sale. This matter is a moot question. We are going to have more to say about it another time. At all events study the therapeutic field of barley in summer dietetics. It will help to save lives.—Am. Jour. of Physiologic Therapeutics.

AN HONORABLE COLLECTION AGENCY

Somehow dishonesty in their dealings seems to follow many collection agencies, but there is one in Minneapolis that has no taint of this character, and it is that that has gained the confidence of many of our best physicians by years of business relations. We refer to the Physicians and Surgeons Association, of which Mr. H. M. Stocking is the manager, with offices in the Eastman Block, 412 Nicollet Ave., Minneapolis.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, SEPTEMBER 15, 1911

No. 18

FRACTURES OF LONG BONES AND THE PRINCIPLES OF TREATMENT*

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LEAD, S. D.

Fractures of the long bones of the body cover a large part of all the fractures we have to treat, and therefore to go into detail with each individual bone would require more of your time than I wish to take.

In making up a summary of the different fractures, I find the following is the result of our records up to December 31, 1910: total number of all fractures,—1,428. These are divided as follows: skull, 113; face, 71; hyoid, 1; clavicle, 54; scapula, 14; spine, 14; sternum, 2; ribs, 106; pelvis, 19; humerus, 84; forearm, 188; metacarpal and metatarsal, 125; femur, 77; tibia and fibula, 267; patella, 6; phalanges, 286. Deducting the fingers and toes, you will see that in our locality the tibia and fibula take the lead, 267; next, the forearm, 188; third, the ribs, 106; fourth, the humerus, 84; and, fifth, the femur, 77.

It is also a fact that fractures of the long bones occur more frequently at the distal end, and next the middle third; and they are also more prone to fracture at the distal end of the extremity, ankle, and wrist, and less frequently at or near the body, as at the hip-joint and shoulder-joint. This is accounted for by the exposure of these bones; and probably because they are not so well nourished.

It is hardly worth while to go into a detailed diagnosis of all these fractures, but suffice it to say that pain on motion, excessive motion, a false

point of motion, deformity, shortening, and crepitation are the principal symptoms. We use the x-ray for diagnosis in obscure cases, but we always use it, if possible, after the fracture is set, for it is more important at this time than before; and in using it we take two views, antero-posterior and lateral. If you take a view from only one direction, you may think the line is all right, while a view from the other direction may show you that the fracture is not in line at all. In taking x-rays of fractures, the plate should be as close to the bone as possible, and the tube always at about the same distance, say from 15 to 18 inches. As you know, you are photographing shadows of the bone, and if you are not careful in your calculations the photograph will give you a wrong idea of the amount of displacement.

The general plan of treating all fractures is, first, to relax the opposing muscles as much as possible by the position of the part, and support of the fracture with any splint that will hold it and is, in your judgment, the best, as every one who handles fractures has his own ideas. Personally, I use no patent splints, for I have tried and abandoned most of them, so I usually make a splint for each individual case.

The one principle not to be forgotten is to immobilize the joint above and below the fracture, except where there are two bones and but one broken; then, at your discretion, you may omit one of the joints.

After the splints are adjusted you should take

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

a two-view x-ray skiagraph. If the bones are not properly adjusted the x-ray skiagraph shows where the fault lies; and then if it is impossible to adjust them properly, an operation is necessary, either by wiring, staples, screw, spike, or bone-plate, as indicated by the case and your ability to use these methods. In our work with the use of the x-ray in adjusting fractures I do not think we need operate on more than 2 per cent of all cases of fractures of the long bones.

After applying a dressing it should be kept under close observation for the first few hours, to see that the swelling does not impede the circulation (eternal vigilance is the maxim), but do not meddle with the dressing every day just to see if the bone has grown together. I have put up a femur and not removed a bandage for six weeks. Massage may be given after three weeks, or after all danger of the fragments getting out of place, but in my opinion this is not very important, and is a dangerous procedure with the long single bones.

You may ask, When should passive motion be commenced? Most of the authors say early, but in our experience and work I never try passive motion until I am satisfied that there is complete bony union, and I do not fear a stiff joint unless the fracture communicates with the joint.

In treating a Colles fracture, the splints should never extend to the finger-tips, to the middle of the palm is sufficient; and in old people the wrist should be turned loose as soon as possible.

The nerves may become injured or caught in the callus, the musculospiral as it curves around the middle third of the humerus, the ulnar as it passes behind the inner condyle, or the median as it passes in front of the elbow-joint. I have had two cases at the elbow, the ulnar in one and the median in another, and have seen in consultation one of the musculospiral.

The arteries that are liable to be injured are the brachial and the radial in the arm, the femoral, and the anterior and posterior tibial. I have had two cases, the first one was of the brachial as it passed in front of the elbow in a comminuted or T fracture of the condyle, cutting off all the circulation except the collateral; the second case was of the anterior tibial in a fracture of the tibia four inches below the knee.

Compound and compound comminuted fractures are to be treated individually, and no set rule can be laid down. In some cases the fleshy parts may be badly lacerated and full of dirt, and there may be fragments of loose bone lying

in the wound, or an artery may be bleeding, or the outside wound may be just a puncture. In cleaning compound fractures, you should protect the wound with sterile gauze while cleaning the surrounding parts. If the torn parts are clean, do not touch them with soap and water. Any little particles can be picked or trimmed off. Scrubbing out the wound and the ends of the bones with soap and water only carries in infection; therefore avoid it as much as possible.

If muscles and tendons are cut they should be repaired, and the wound closed with rubber drainage. Punctured wounds may be painted with iodine and put up without drainage.

In conclusion, let me say that it is impossible to get perfect apposition, and that in oblique fractures—and all fractures of the long bones are more or less oblique—there is some over-riding. This makes the callus a little larger, but Nature deals with this fracture as a plumber wipes and smooths a joint; and in time you can hardly recognize where the fracture is. Some enlargement can be obviated only by saving the ends of the bones off and shortening the parts, which is not desirable, particularly in the leg. What we expect is perfect functional results.

These points will now be brought out in the cases illustrated in the slides. In presenting the photographs for this paper, I shall select from the lantern slides only the operative cases shown you.

CASE 1.—October 28th, E. B., aged 28. Fracture of the humerus at the junction of the middle and upper



Fig. 1. A.

third. Union was apparently complete at the end of two months, and all retention was taken off. January 12th, two and one-half months later, he fell and re-

fractured the bone. This time it was impossible to hold the bone in good line. (Fig. 1 A.) He was then



Fig. 1. B.

operated on and the ends wired with silver wire. Fig. 1 B was taken several months later and shows the terminal result.



Fig. 2. A.

CASE 2.—August, 1908, J. E., aged 61. A broken-down, dissipated man. Fracture of both bones of the forearm in the middle third. The radius is a simple fracture, while the ulna was comminuted, although the fracture of the comminuted part, one and one-half inches long, had not completely separated. It was found impossible to hold the ulna in place, and we proceeded to wire the parts together. While we were working on it the fragment became completely separated, and it was wired in place. (See Fig. 2 A.) The fragment failed to unite, but it afforded a bridge where new bone was formed. In about six months we removed the wires and the fragment.

Fig. 2 B, taken one year after the injury, shows the terminal result.



Fig. 2. B.

CASE 3.—E. J., aged 25. March 4, 1910. A compound comminuted fracture of both bones of the forearm, four inches below the elbow. The muscles on both



Fig. 3. A.



Fig. 3. B.

sides of the front of the arm were cut off. The arm was so badly lacerated that it was a serious question whether it could be saved at all. The ulna was badly

comminuted, fragments lying loose in the wound, and it was impossible to wire it. The radius was wired, and the muscles united by sutures. The wound was dressed with rubber drainage. (See Fig 3 A.) Union was very slow, and the support was worn fourteen months. Fig. 3 B shows the after-result, with good functional action at the elbow and wrist.

CASE 4.—A. G., aged 16. Schoolboy, fell while playing in the gymnasium. Sustained a simple fracture of both bones of the forearm, one and one-half inches above the wrist. Two attempts under an anesthetic



Fig. 4.

failed to reduce the fracture. This was due to the uneven or dovetail condition of the fracture. (See Fig. 4.) It was reduced by cutting down on the fragments and using an elevator. Wiring or bone-plates were not necessary in this case.



Fig. 5. A.-lateral.

CASE 5.—E. H., aged 22, May 19, 1911, at 3 P. M., while driving on the prairies thirty-five miles from a railroad, was thrown from the rig, receiving a compound comminuted fracture of the femur at the middle third, the bone protruding through the clothing. He was not found until 9 P. M. and then taken to the railroad and sent to a hospital, arriving at midnight on the 20th. Under an anesthetic the wound was cleaned,



Fig. 5. B.-Anteroposterior.

but we found the muscles had contracted so much that there was a shortening of two inches with the upper fragment pulled outward and the lower fragment down so that they were not in line laterally or anteroposteriorly, and we could not throw them into line by manual traction. He was put up in a Hodgen splint with extension, with the hope that we could overcome or tire out the muscles, but an x-ray showed that we were mistaken, and on the 23d we operated by using a block and tackle to produce sufficient extension to reduce the fracture, and bone-plates were securely fastened with screws. Long anterior splints were applied. The patient was kept under the anesthetic until he was returned to bed and the Hodgen splint with extension applied.

At the time of the operation the wound showed beginning of infection. On May 25th, or two days after the operation, an x-ray was taken. See Figs. 5 A and 5 B, which show that the muscular action was such that the plate was bent in two directions while one of the screws was pulled out. The patient died of septicemia on May 26th.

CASE 6.—W. H., aged 42, June 6, 1911. This is the case reported at the meeting, but at that time I did not have a lantern slide. It was a comminuted fracture at the junction of the middle and lower third. Fig 6 A shows the appearance of the fracture after two attempts under an anesthetic had been made, and also after the muscles had been under extension for twelve days. We then operated, and used the bone-plate and reinforced it by putting a screw under the lower fragment, attaching a silver wire to it and to one of the screws in the plate.



Fig. 6. A.-lateral.

Fig. 6 B shows the fracture as it is held in position at the present writing.



Fig. 6. B.-lateral.

In conclusion: In preparing for operating on fractures of the femur a block and tackle for holding the leg and extension and a screw-driver with a clasp that holds the head of the screw, add greatly to the success of the operation, and I wish to say that the soft silver screws will not drive successfully.

DISCUSSION

DR. R. L. MURDY (Aberdeen): While the subject may not need any further elaboration, since it has been so ably presented by Dr. Freeman, yet the principles of treatment cannot be too well understood. The fact that authors are not all agreed as to the exact methods of treatment, goes to show that our methods need further elaboration and refinement.

Personally, I believe in the open method of treatment and wiring the fragments with "O B" wire, the Lane splints, kangaroo tendon, or catgut, if they can be treated by aseptic methods, such as we are all agreed is sufficient for a laparotomy, and by a surgeon who is skilled in this class of work. I cannot reconcile our fear of opening an intact skin and muscle for the treatment of a distorted fracture with our enthusiasm to open a belly for all kinds of more or less benign lesions. Therefore I want to go on record as favoring the open treatment for the following class of fractures under the conditions above stated: fractures of all long bones without a fellow where deformity exists

and reduction is difficult or impossible or where reduction cannot be properly maintained, also where there are double bones with both bones fractured; fracture of the short bones, like the patella, os calcis and olecranon; also all compound fractures and depressed fractures of flat bones, and all fractures that involve joints.

Some special fractures need to be treated by the open method and wiring, like the radius when it is fractured above the insertion of the supinator longus. In this fracture one fragment is rotated in one direction and the other in the opposite by the opposing action of the muscles, as well as narrowing between the bones which leads to ossification of one bone to the other, producing limitation of pronation and supination. Should the open method prevail and the fragments be wired or secured with the Lane splints, much more remains to be done, for all cases of wiring require careful adjustment of splints. The success or failure in the treatment of these fractures depends upon the adjustment and maintenance of fragments; therefore the wiring is only a good start, and the splint adjustment is all important. In this connection I would like to call your attention to the abuse of ready-made splints and splint-boards. Ready-made splints and splint-boards have just one use, and that is for temporary dressings only. There is only one splint made that is worthy of the name for a permanent dressing, and that is the Hodgen splint. We have in plaster-of-Paris, however, the best known mechanical aid in the maintenance of fractures. A properly molded plaster splint is the best splint, the most comfortable, and the most reliable that can be used for fractures. The splints should be double or put on in pairs, and the splint should immobilize the joint above and below the fracture, if such exists. Another feature of the molded plaster splint which commends it, is the fact that it can be molded after the wiring is completed and the dressings applied. If well made and well adjusted it can be used throughout the entire time of treatment. It can be taken off to dress the wound, as required, with the least amount of shifting of the parts possible.

I just want to emphasize a few points further in Dr. Freeman's paper and demonstration. One is the matter of cleansing the wound in compound fractures. It is the common practice for doctors to vigorously and laboriously scrub the wound with soap and water. Personally, I believe the best method to pursue is to do away with the washing, and rub the skin with a little benzine and paint the lacerated tissues and field with iodine.

The doctor spoke about patent splints. I am glad to hear he is not in favor of ready-made splints. We rarely find one applicable to any kind of fracture.

In regard to the treatment of Colles' fracture: The point the doctor made was properly unlocking the fragments. We should remember that the treatment of Colles' fracture consists in properly unlocking by increasing the deformity and then extending it. Almost any kind of a splint will hold it in position if the deformity is corrected by the above method.

Now, a word in regard to fractures into the joints: I think those are all cases which should be treated by the open method. Treat by the open method and pick out the spiculæ, for if they are not picked out we shall have osseous material thrown into the joint, and stiff-

ness of the joint with limitation of motion will result.

I believe more and more, as my experience increases, that we should treat fractures by the open method of wiring and the Lane splints.

I learned one thing in Dr. Freeman's demonstration, and that is the fact that, except in very few fractures where the ordinary method is employed, it is not possible to have an end-to-end adjustment of the fragments. I want to emphasize the fact that by the right method the fragments are brought accurately into position. Accurate position shortens the time of disability, gives a stronger union, and lessens the deformity.

DR. J. W. FREEMAN (Essayist): The doctor brought out the point regarding the entrance of the interosseous artery, which might have something to do with non-union. In all my experience I have never failed to get union. There was one case, in particular, of the femur, which occurred before I had the use of the x-ray, which helped me out in the subsequent treatment of the case. It was put up in a Hodgen splint, and at the end of eight weeks I had no union. The parts were put up in a plaster-of-Paris dressing for another six weeks, and still there was no union. This fracture occurred about the middle of the thigh. I cut down on it, cleaned out the surface, and wired it together, and I got union in about eight weeks. I had under my care at the hospital this man for fourteen months. I got perfect union and motion.

One case I spoke of in my paper, which is under observation at the present time, was a case where the brachial artery was cut. This case was interesting because of the circulation. The young fellow had been caught between the bumpers of an air-engine weighing about five tons, which was drawing a train of cars from the mine. One bumper caught him below the elbow in front, and the other bumper caught him behind the elbow so as to throw the upper fragment of the humerus forward. This case had the appearance of a bad dislocation. Before putting him to sleep I noticed there was no circulation in his hand, and I thought when I reduced the fracture the circulation would return, but for five or six days it was just the same. We kept the arm warm, but the circulation was very slow in the fingers. These parts are supplied by the anastomotic magna and the radial collateral which are branches of the brachial artery, and today the young fellow is going to lose four of his fingers back to the

first joint. He is also going to lose part of his thumb. They have simply dried up. A part of the forearm has sloughed off, and we are going to try skin-grafting in time. Just what the motion is going to be I cannot tell. In the other cases I found the non-union was simply due to the muscles getting between the bones and separating them, making it an impossibility to get them in apposition until the muscles were removed.

As to using bone-plates in the open treatment: If any of you have tried to wire the femur you know what you are up against. There is not a man who can pull on the leg and overcome the muscles, or get the leg down in position to put the plate on. Take the same thing in wiring, you have to arrange for it; you have to get your patient on a table and use the block and tackle, and you have to fasten the table in such a way that it will not roll all over the floor. In the case shown I had the plate in perfect position, and when the patient was put to bed I know it had not been disturbed. It shows what these muscles will do in two days. I remember a case of a comminuted fracture in the lower half of the femur. One of my assistants flexed the leg, and two of them pulled on it, and could not pull it in place, showing that the muscles of the thigh have great strength. Usually, in a condition of that kind the muscles pull harder than at any other time, and I am of the opinion that in all these cases you operate on you should put them to bed and put on an extension to tire the muscles, then you will not have so much trouble. I am of the opinion, even if the bones are right in sight, the best thing to do is to wait a few days until the action of the muscles is more overcome.

I have these splints I show you made by the dozen. This is simply a retention-splint to hold the bone in position. It is cheap, it does not cost much, and there is no patent on it.

Now, a word about the use of catgut. I have no use for catgut in the retention of any fracture. I have no use for it whatever. It does not hold firmly and is liable to become untied. If you are going to use anything of that nature, use bronze or silver wire or staples. I know of several cases that have come under my observation where catgut was used and where it has been a failure. I know of two instances, one of the shoulder-joint and one of the ankle-joint, where catgut did not hold.

SOME ESSENTIAL DIFFERENCES BETWEEN THE COMMON SURGICAL AFFECTIONS OF INFANCY AND CHILDHOOD AND SIMILAR CONDITIONS IN ADULTS*

BY HOMER B. SMITH, A. B., M. D.

FARGO, N. D.

At the beginning of adult life, or about the age of twenty, the physical equipment of the normal individual is approaching a state of maturity. The period from birth up to this time is a period of growth and development. From the viewpoint of surgery, the course of disease and injury after the age of puberty sufficiently resembles similar conditions in adults not to require special study. The years preceding the age of puberty, however, or the periods of infancy and childhood, are years in which the organs and tissues are growing and changing daily, and their separate and correlative functions are developing, conditions which alter the course of disease and which must consequently modify the methods of diagnosis and treatment that are commonly applied to adults.

In the study of the medical affections of childhood, the importance of a special knowledge of the stage of development, in order to intelligently treat the disorders of this period, has been recognized to the extent that medical pediatrics is given special consideration in modern teaching, and in practice it has become a quite properly recognized specialty. The pediatricist has taught that the child is normally a different physical being from the adult. This fact, together with the rather general establishment of children's hospitals where large numbers of young surgical patients have forcibly impressed upon the surgeon their peculiarities and idiosyncrasies, has been chiefly responsible for the recent greater interest and better study of the surgical affections of infancy and childhood.

In surgical pediatrics, as in medical, there are certain affections which may be said to be peculiar to childhood. These are, for the most part, the congenital malformations, such as ectrophy of the bladder, imperforate rectum, hypospadias, etc. Such conditions are not likely to escape detection and appropriate treatment. It is to the common or "every-day" diseases, which occur at practically any age and which, occurring in children, are commonly but quite erroneously regarded as presenting the same problem in diag-

nosis and treatment and as running the same course as in adults, that I ask your consideration. These conditions in children present different signs and symptoms, run a different course, require different treatment, and arrive at a different result.

These variations in the clinical picture and the differences in the surgical problem are due, not to abnormalities, but to normal differences between the structure and functions of the normal child and the structure and functions of the normal adult.

Inasmuch as diagnosis in children must rest largely upon objective findings, the importance of a careful consideration of the anatomic and physiologic age of the child is evident. The anatomic variations from the adult type are not confined to any group of organs or tissues, but perhaps the most marked and most common variations are to be found in the osseous system and in the alimentary tract, and it is to a few of these that I ask your attention.

THE BONES

Anatomy.—The texture of the bones in infancy and childhood is spongy and elastic. Ossification, generally speaking, is not complete for some years after puberty. The epiphyseal lines are a source of mechanical weakness, and, owing to their vascular supply, the bones are a frequent seat of acute infection. The periosteum is thick and loosely attached everywhere except at the epiphyseal lines and tendinous insertions. These factors make it a source of mechanical strength in injuries to the shaft; and in infections the periosteum and the character of its attachment to the cortex may influence the spread of the infecting process.

"The character of all lesions involving the bones of infants and young children depends largely on the anatomy of the epiphyses and to a less extent of the periosteum. This is true whether the trouble is traumatic, infectious, or, for lack of a better term, constitutional."* Add to these anatomical factors the trauma and in-

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

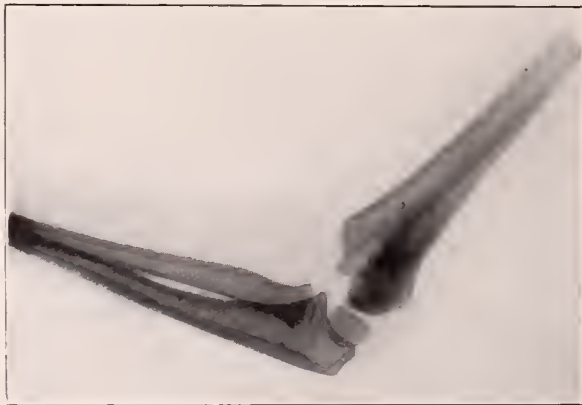
*Stone, J. S.: "Acute Epiphyseal and Periosteal Infections in Young Children." Boston Med. & Surg. Jour. Vol. clvi, No. 26, June 27, 1907.

fection to which children are exposed, and these are conditions favoring the production of a group of lesions not often met with in later life. The extent to which ossification and growth have proceeded will modify, in some degree, the surgical importance of these variations.

I. *Traumatic Lesions*.—These include (1) the epiphyseal separations, (2) subperiosteal hematoma, and (3) green-stick fracture.

(1) *Epiphyseal separations*: Separation of the epiphysis from violence is a relatively common injury and one that is not always recognized. The epiphyseal union is not firm until after puberty, while the ligamentous attachments at the joints offer great resistance. Separation of the epiphysis is therefore likely to precede dislocation or fracture in case of violence. The firm attachment of the periosteum at the epiphyseal lines and its loose attachment to the shaft frequently result in a considerable portion of the periosteum being stripped off from the shaft if there is much displacement of the epiphysis.

A child of five years sustained a separation of



X-ray No. 1. Note the bone proliferation.

the lower epiphysis of the humerus. The radiograph after reduction showed the fragments in good position. Three weeks later there was marked limitation of motion. On flexion the coronoid process of the ulna impinged upon a bony mass on the anterior aspect of the lower end of the humerus. The radiograph taken at that time showed bone proliferation between the shaft and a strip of periosteum which had been torn off at the time of the injury by the displaced epiphysis. (See Fig. 1.) In this case there was subsequent absorption of the mass like a callus. In some of these cases if the mass persists it may be necessary to chisel it off, in order to restore normal motion.

This condition is most likely to occur as a result of delayed reduction. The periosteal stripping is sometimes so extensive as to produce necrosis from cutting off the circulation in the shaft. If the epiphyseal line lies within a joint the joint may be implicated, and sometimes supuration follows. A portion of the stripped periosteum may become engaged between the fragments, rendering reduction difficult or resulting in delayed union.

These considerations, together with the fact that the displacement in these injuries may be slight, a relatively severe injury showing only swelling and tenderness and causing the injury to be treated as a sprain, suggest the most careful examination of injuries about the joints in young children. Many will escape detection unless the x-ray is employed.

(2) *Subperiosteal hematoma*: The vascularity of the periosteum and its loose attachment to the cortex also favors the production of subperiosteal hematoma. This is true not only of the long bones of which the bruise of the shin bone is an example, but of the bones of the skull as well. The loose attachment of the periosteum in this region offers a favorable opportunity for blood-extravasation in case of injury, while the strong attachment of the periosteum to the borders of the bones sharply limits the area of the extravasation, which is an important point to remember in the diagnosis of head injuries in young children. I saw a child of thirteen months who had fallen down stairs striking on his head. There was a hematoma in the left parietal region. What appeared to be a distinct depression could be felt running from before backward, at about the middle of the parietal bone. The probabilities of a subperiosteal hematoma were discussed at length, and the final consensus of opinion was that the condition was a depressed fracture of the skull. I exposed the parietal bone and found a linear fracture of the bone without depression, the apparent depression being caused by the sharply defined edge of a subperiosteal hematoma.

Generally speaking, it is difficult to fracture the skull of a very young infant, for the bones are soft and yielding, and a blow indents without fracturing, the dent springing out much after the manner of a depression in a tin cup.

(3) *Green-stick fracture*: The elasticity of the bones, together with the loosely attached thick periosteum, favors the production of the subperiosteal or green-stick fracture, a condition not often seen after puberty. Many of these

fractures present little or no displacement and are quite likely to be overlooked unless careful examination is made. The *x*-ray is of distinct value in the examination.

II. *Infections of Bone*.—These include epiphyseal, periosteal, and medullary infections.

Cause.—The underlying cause of these infections may often be directly traced to some preceding disease which not only impairs resistance but brings the infecting organism into the circulation, such as typhoid, pneumonia, the exanthemata, infections of the nasopharynx, etc. Any of these may lead to the infection of a vascular area like the epiphyseal line if its resistance has been impaired by trauma.

Course.—If promptly treated, an infection of the epiphysis may be confined to the epiphyseal line. If untreated, the infection will travel in the direction of least anatomical resistance. J. S. Stone reports* a case in which he found the epiphyseal head of the femur lying free in an abscess cavity, the pus having followed the epiphyseal line, entirely cutting off the epiphysis.

If the epiphyseal line happens to involve a joint, the direction of least resistance may be into the joint. If the focus is near the edge of the epiphyseal line it may involve the soft parts outside of the bone. This has been the most common course in the cases which I have observed. If the exciting trauma has loosened the periosteum near the epiphyseal line, the spread may be along beneath the loose periosteum, a dissecting periostitis. In such a case the entire shaft may be cut off from its blood-supply and be cast off as a necrotic mass from the periosteal shell.

A girl of seven years on whom I operated for an infection of the upper epiphysis of the fibula and who shortly afterward passed from my observation, came back seven weeks later with the entire leg much swollen. Drainage had not been maintained at the site of the operation. On exposing the fibula the entire shaft was extruded as a necrotic mass from the periosteal shell from one epiphysis to the other. There was no evidence of a true osteomyelitis, the condition being, rather, a necrosis due to a dissecting periostitis. Subsequently a new shaft formed from the periosteum.

"In the early years of life when the epiphyseal line is wide and vascular the tendency of infections is to spread along this line rather than to enter the medulla. As adult life approaches and

the epiphyseal line becomes thinner the likelihood of the infection entering the medulla becomes greater. Thus infections involving only the epiphyseal line are to be expected only in young patients, whereas infections in the epiphyseal line in older patients must spread into the medulla and become a true osteomyelitis."*

Diagnosis.—The swelling and tenderness about the joint in these cases is too often mistaken for rheumatism. The fact that the swelling in rheumatism is in the joints, whereas in the bone infections it is in the epiphysis and shaft, is a differentiation perhaps easier to make in theory than in practice. The epiphyseal infections may be multiple, though they are not so as a rule. Perhaps the most valuable aid in differentiation is the greater intensity of local symptoms and the more pronounced constitutional symptoms of the bone infections.

A poorly developed and nourished child of nine months was sent to the hospital for operation for an extremely tender and considerably thickened right femur. He had always had digestive disturbances and had had a similar swelling three months before, from which he had recovered. He did not look sick. The radiograph showed displaced epiphyses and a ragged epiphyseal line, subperiosteal hematoma with organizing bone in the hematoma. On a carefully regulated diet and orange juice, the signs and symptoms disappeared. Generally, the relatively mild fever, the other signs of scurvy, and the slow onset should prevent mistaking these cases for osteomyelitis.

J. S. Stone has called attention in his paper on the subject of bone infections in children to the value and limitation of the *x*-ray in these cases. Taken early in the course of acute infections of the epiphyseal lines there is no change in the bone-shadow. In the periosteal infections there is a vague, if any, change. Later in the disease new-forming bone may be seen developing from the periosteum, but early in the disease the *x*-ray is of only negative value. In the differential diagnosis between acute osteomyelitis, scurvy, syphilis, rickets, and bone-sarcoma the *x*-ray is of distinct value.

Treatment.—In the treatment of these conditions the indication is to follow the pus to its farthest limits, but, what is of equally great importance, the operation should not proceed beyond that point. These infections are, for the most part, outside the shaft, and to drill into the

*Boston Medical and Surgical Journal, Vol. clvi, No. 26.

*J. S. Stone, Boston Medical and Surgical Journal, Vol. clvi, No. 26.

shaft when the abscess is found outside, unless there is good evidence of medullary infection, is to carry the infection farther.

III. *Bone Growth*.—The growth of bone is largely from the epiphyses; and therefore any interference with the epiphyseal cartilage, whether due to trauma, infection, or operative interference, may involve ultimate shortening, a fact to be remembered as modifying the prognosis in any lesion of the epiphysis whatsoever, especially in cases involving the epiphyses which contribute most to the growth of the bone, namely the lower epiphyses of the femur and radius and the upper epiphyses of the humerus and tibia.

THE ALIMENTARY TRACT

Anatomy of the Child's Abdomen.—In the early years of life the abdomen must not only accommodate its own organs, but, owing to the shallowness of the pelvis and the slight concavity of the sacrum, it must accommodate the bladder and the upper portion of the rectum as well. The liver is relatively large, being palpable below the ribs until puberty. The kidneys, although not abdominal organs, are also relatively large, lobulated, and easily palpable by abdominal examination in early life.

Still other structures have not attained their relative adult size. The insignificance of the child's great omentum is a fact of considerable surgical significance. The growth of the different portions of the colon is not uniform; in fact, its variations within normal limits are so numerous that they bear no constant relation to the growth of the body, a fact which explains the apparent anomalies of position and dimension so frequently noted by different observers.

The vagaries of the colon, and especially of the cecum, are shown, not only in its various positions, but also in its ability to change its position. In the early years of life it has no fixed habitat for itself or the appendix. The cecum is usually relatively high in the child. Before the end of the third year it may project beyond the median line, or it may be on the left side. This is due to arrested development. On the other hand, it may have proceeded to the right side but with a persistence of the mesentery.

These variations of the abdominal organs in infancy and childhood in shape, size, structure and position, and in their relations to each other, together with the absence of any fixed type of development, are considerations which materially affect the nature and course of disease and

modify many notions of diagnosis and treatment as applied to adults.

Abdominal Diagnosis in Children.—In appendicitis, for example, the cecum and appendix may normally be found in almost any quarter of the abdomen with symptoms depending more or less on the location. I recently saw a boy of ten years who was taken with vomiting and pain in the back on the right side. The temperature was normal, and the pulse 80. The abdominal examination was negative, and the urine showed nothing abnormal. Twelve hours later the pain was more severe, but still confined to the small of the back. The examination revealed slight rigidity and tenderness in the right flank. The pulse was 100, and the temperature was normal. A high incision revealed the cecum lying in the position usually occupied by the hepatic flexure. The appendix lay behind the cecum, but not retroperitoneally, and pointed upward and outward.

I was called to see a girl of eleven, who was said to be suffering with painful and frequent urination accompanied by vomiting. There were also frequent loose and painful movements of the bowels. The child looked sick. The abdomen seemed generally tender, but the child was considerably frightened, and the examination was unsatisfactory. Examination by rectum showed a tender mass rather high up in front of the rectum. Operation revealed a badly inflamed appendix in the median line adherent behind to the rectum and in front to the posterior wall of the bladder. The mobility of the cecum, and the relatively high position of the bladder were anatomical facts which, undoubtedly, contributed to produce the urinary and rectal symptoms.

I have several times found the cecum and appendix in the sac of a right inguinal hernia in children and have been able easily to draw the cecum in to the hernial wound and amputate the appendix as many times more. There are reported cases of finding the cecum in the sac of a left inguinal hernia so movable was the organ. The amplitude of the mesentery plays a part in the mechanical production of intussusception, as well as accounting for the varied positions in which the tumor of intussusception is found. The tumor of the ileocecal type may be found above or below the navel on the right or left side or in the pelvis, or it may often protrude from the rectum and not be felt abdominally. These conditions are possible only with a long mesentery.

The abdominal location of the pelvic organs

in young children has been mentioned. The bladder has been cut down upon for abdominal tumor. A distended bladder in a young child can obscure pretty much all of the abdomen from palpation, which suggests the practice of emptying the bladder before making an examination. I have once found a portion of the bladder and the right ureter in the sac of a right inguinal hernia in a boy of four years, and several times I have found the ovaries in the hernial sac.

ANATOMICAL FACTORS FAVORING GANGRENE, PERFORATION AND PERITONITIS

Peritonitis follows the acute abdominal affections in children more often than in adults. The perforations causing peritonitis are usually those of the appendix. Perforations of the stomach and bowel, as well as peritonitis following genito-urinary infections, are relatively rare. I have had one case of perforation of a tubercular ulcer in a child of seven years. In a paper on "Peritonitis in Children,"* written four years ago, I expressed the belief that the perforations of the appendix in children are usually larger than those found in adults. There are anatomical reasons which bear out this clinical experience. The appendix in children is relatively large, both in proportion to the body and to the alimentary tract. The meso-appendix is often very short (Kelly), leaving that portion which extends beyond it deficient in vascular supply. An inflammatory process will accordingly cut off a relatively larger portion from its blood-supply, and gangrene and perforation are more likely to follow. The coats of the child's appendix are also more delicate, especially the submucous coat. With a large perforation and a sudden outpouring of a large amount of septic material into the peritoneal cavity, there will be less likelihood of the formation of a definite walling-off process.

There are other factors which account for the frequent diffusion of the infection. The small and filmy omentum of the child offers little aid in the formation of protective adhesions.

Certain common signs and symptoms require qualification if they are to be correctly interpreted in children.

Pain.—Children are either actually less sensitive to pain than adults or else they are able to endure it in a really remarkable way. Morphia is rarely necessary for pain after operation. Their inability to distinguish between pain and

tenderness often leads the surgeon into error. Children fear being hurt, a fear which is quite likely to result in their holding the abdominal muscles tense, often making it impossible to distinguish between voluntary and involuntary spasm. It is often impossible to satisfactorily palpate the abdomen of a young child without an anesthetic. Frequently, more can be learned of abdominal diagnosis by rectal examination than by abdominal palpation. It is surprising the extent to which the abdomen can be explored by the rectum.

The surgeon who does not keep in mind the frequent manifestations of referred pain in children will often be led into error. The knee-pain in hip-disease and the abdominal pain in the same condition are examples. The abdominal pain of pneumonia has led to many unnecessary operations. Sometimes the diagnosis between pneumonia and appendicitis is difficult to make, especially as, in the former condition, there may be some abdominal tenderness and spasm or distention, and there may be absence of physical signs in the chest if the pneumonic process is a central one.

I once prepared to open the abdomen of a child of six years for appendicitis, the diagnosis having been made by exclusion. A consultant suggested an examination of the child's spine, and a beginning Pott's disease was found. Abdominal pain and tenderness is not unusual with this condition in young children.

The tenderness and pain of appendicitis are very often umbilical in children, even when the appendix is located elsewhere. This is undoubtedly referred pain (plexus of Meissner and Auerbach).

Vomiting.—Vomiting in young children is so common from almost any cause that it is a symptom of negative value. In suspected peritoneal conditions one may wisely hesitate to open the abdomen in the absence of vomiting.

Temperature.—The temperature-controlling mechanism of the child is delicate and easily disturbed; therefore variations in temperature which are not sustained, and in the pulse and respiration, as well, do not possess the same significance as in adults.

Operative Methods.—The variations from the adult type of organs and tissues demand certain modifications in operative methods. The smallness and delicacy of tissues and the smallness of spaces, demand greater technical skill. Most important of all is a due respect for the limited resistance of children to hemorrhage, shock, and

*H. B. Smith: "Diffuse Peritonitis in Young Children."—Boston Med. and Surg. Journal, Vol. clvi, No. 31.

infection. They stand loss of blood poorly. Many die from such operations as the repair of a hare-lip, circumcision, etc., in early infancy. Children bear operative procedures well up to a certain point. If they leave the table prior to this, recovery from the operation is usually prompt. Once this point is passed and the child begins to show the effects of the operation, the change in condition is rapid. This important period has been called the "margin of safety" by Vincent,* and is "the interval between the stage of the operation when a change in condition is first noted and the time when the patient is seriously affected by the strain of the operation." This period is narrow in children, and once it is passed it is very disturbing to find how little recuperative power exists. A child resists any invading process, whether it be traumatic or infectious, well if the invasion is of short duration. His resistance may be said to be of good quality, but limited in quantity. It seems unnecessary to say that it is a great mistake to sacrifice a child for the sake of a complete operation in the case of an appendix abscess, if drainage is all that is indicated to save life, yet this is a too common occurrence. Not only poor results but actual danger follows operations of expediency or plastic operations in children with a temperature from any cause, or in the presence of any infection, such as bronchitis, rhinitis, etc., or when the exanthemata are prevalent.

CONCLUSIONS

From birth to the age of puberty the structure of the child, the relations of the organs, and the state of their development present normally marked differences from the adult type; and the course of certain diseases and injuries is directly dependent upon these variations. Since diagnosis must be made largely on objective signs, a knowledge of these facts is essential to the proper interpretation of signs and symptoms.

The operative treatment of the surgical diseases of childhood calls for considerable technical skill and due regard for the limited resistance of the child to anesthesia, trauma, and infection.

DISCUSSION

DR. GEO. A. CARPENTER (Fargo): I listened with very much interest to the doctor's paper and he brought out a great many valuable points. Of course, our great trouble in the treatment of children is to make a diagnosis, and we realize the value in many of these cases of a positive diagnosis. It is almost impossible to get a history of the case that is of any

value, and what history we do get we get simply from the parents.

In regard to the condition of the bones that he spoke of, we certainly should feel very grateful for the fact that we have the x-ray for completing the diagnosis in all bone troubles. The plate that the doctor referred to which I gave him to use in connection with this paper came to be made in this way: A patient came to me a few days ago, a little boy who had simply fallen off from a little express cart in playing with some other children, and in falling some of the other children had fallen on top of him. When I examined the limb the contour was perfect, and I was careful to see if there was any injury done, and in manipulating the tibia I felt a little snap, just a trifling movement under my fingers, you could hardly call it a crepitation, but there was something not just right. I put him under the x-ray and found the fracture the doctor noted on the plate. It shows that it is possible to get an injury to the bone of such a nature that it cannot be determined without the use of the x-ray. This child was about five or six years old, and evidently it was a fracture within the periosteum itself with the fibula holding the bones in apposition. I had been engaged in the practice of medicine for some little time before the x-ray came into vogue, and I realize now how hard it was for me to determine what conditions were present in an injury to the bones before we had the x-ray. I know nature is very good to these little children when they sustain injuries, but I can look back now and realize that there were a great many injuries that I treated in which I did not recognize the exact condition. The elbow is another portion of the body to which we must give careful attention. I can recall two cases coming into the office within two months' time in which an x-ray examination was made and an epiphyseal fracture of the humerus was found. There was some condition there not just right, and for that reason I submitted the cases to the x-ray and found the fracture through the epiphysis. Therefore, in cases of children I should always be careful to make a close examination.

DR. C. E. SPICER (Litchville): This is a subject which should interest everyone in general practice. So far as I am personally concerned, a great many truths have been forcibly brought home to me in listening to this paper, and I am sure we should all be very much concerned in this branch of our work. If any of you have any experiences to relate I hope we may have them, for they cannot fail to be helpful to one another.

DR. E. P. QUAIN (Bismarck): It is a mistake to speak of appendicitis as almost exclusively a disease of the young adult. I believe it occurs in children much more frequently than we have supposed. Certain German writers have stated recently that no doubt 75 to 90 per cent of all adults have had appendicitis, either primarily or, more often, secondarily from the extension of bowel inflammations during childhood. Sonnenburg thinks we have all had appendicitis.

Intestinal infections are frequent in children, and in every severe enterocolitis the appendix also is intensely inflamed. Repeated attacks lead to chronic infiltration, interference with circulation, obstructed lumen, kinks, etc. These difficulties about the appendix cause many of the stomachaches and bellyaches so often complained of among children. We are apt to over-

*Vincent: "Acute Appendicitis in Children." Boston Medical and Surgical Journal, Vol. clix, No. 14.

look these preliminary stages when we see the typical acute attack in a boy of fifteen.

In the matter of differential diagnosis between pneumonia and acute appendicitis, I have found the following method of great help: You sit down by the bedside and let your hand rest with an even pressure on the child's abdomen. If the trouble is above the diaphragm the abdominal muscles will gradually become accustomed to the steady pressure, and after five or ten minutes you can usually make deep pressure without exciting pain or muscle-spasm. Should the inflammation be in the abdomen the pressure will invariably increase the signs of pain.

A child rallies quickly after a successful operation, but, on the other hand, when a baby begins to fail a few hours after a serious operation, it goes to pieces very rapidly in spite of anything we can do. In this I subscribe fully to Dr. Smith's experience.

Another valuable point raised, is the gentleness with which the tissues of a child should be handled. The structures are small and delicate, and the nerves es-

pecially are hard to differentiate, but it is essential that they be carefully saved. In a herniotomy, for instance, it is well to employ a careful and blunt dissection to avoid ligating or cutting across either the vas deferens or the ilio-inguinal nerve. If the dissection be done with sufficient nicety we need only ligate off the sac at its neck to obtain satisfactory results.

DR. E. S. JUDD (Rochester, Minn.): I was very much interested in Dr. Smith's paper, and in the points brought out by Dr. Quain. I want to emphasize what Dr. Quain said about avoiding the nerves in operating for hernia in children.

Dr. Smith spoke of acute osteomyelitis in children. Acute osteomyelitis of the ordinary type usually starts in the shaft of the bone, while the tuberculous type starts in the epiphysis. Whatever the type, the wound should be drained very carefully before there is a chance of extension to the joint. I think the point he made of not going too deep, unless there was good evidence of extension in the bone, should be emphasized.

THE ROYAL LONDON OPHTHALMIC HOSPITAL CLINIC

BY STANLEY E. KERRICK, M. D.

MINNEAPOLIS

The Royal London Ophthalmic Hospital, known also as Moorfields Eye Hospital, was founded by John Cunningham Saunders in the year 1804, and was originally located in Charter House Square. It has occupied its present location, in City Road, since 1889, and is maintained by voluntary contributions for the benefit of the worthy poor. It is the largest and oldest hospital devoted exclusively to treatment of diseases of the eye in the United Kingdom. Since 1893 the hospital has employed an inquiry officer for the purpose of preventing, as far as possible, any abuse of its charity by persons who are able to pay for medical or surgical treatment.

There are six consulting surgeons, as follows: Sir Jonathan Hutchinson, John Couper, Esq., Edward Nettleship, Esq., Sir John Tweedy, Warren Tay, Esq., A. Stanford Morton, Esq., a consulting medical officer to the x-ray department, James MacKenzie Davidson, Esq., and a physician, James Taylor, Esq., M. D. Twelve surgeons and assistant surgeons conduct the clinic. The hospital employs twenty-nine chief clinical assistants, fifteen clinical assistants, and twenty-six junior assistants, graded according to the time they have been in service. The hospital also has three refraction assistants, a pathologist, a bacteriologist, an x-ray offi-

cer, and a librarian, making a total of ninety-two appointments.

The rooms are spacious and well arranged for taking care of the in-patients and a large number of out-patients. There are several well-ventilated wards, giving room to approximately 138 in-patients. A large library is connected with the hospital, which contains medical books, special and general, in English, French, and German. The pathological and bacteriological departments are well equipped and modern in every way. Here blood-tests are made; vaccines are made and tuberculins injected; specimens examined, gross and microscopically.

A large museum is in connection with the pathological department containing gross eye-specimens in many stages of diseased conditions. All specimens of eye-sections are preserved and are obtainable at any time they may be called for, as complete records are made and the sections cased.

The operating-rooms are spacious, well lighted, and well ventilated. Operations are performed in the mornings, usually from 9:30 or 10:00 until 12:00 or 12:30 p. m., chloroform being the predominating anesthetic.

In the out-patient department are several rooms for new and old cases, and a separate room for the refraction of school children, of

whom the hospital examines approximately 5,000 a year. Children with disease of the eyes are sent to the adult department unless they are suffering with ophthalmia neonatorum, and for such patients a special room is arranged.

Four members of the surgical staff, with their clinical assistants, attend to see the out-patients week-days. No letters or tickets of admission are required. Patients are admitted from 8:30 A. M. until 10:30 A. M., and on arrival each is interviewed by the assistant secretary. This arrangement not only facilitates the subsequent work of the inquiry officer, but is an extra precaution against any possible abuse. Waiting-rooms are arranged for new, and separate waiting-rooms for old, patients. Each patient, as he enters before being interviewed, is given what is termed a letter. It is simply a folded paper about the dimensions of an ordinary sheet of writing-paper, bearing the name and age of the patient, with space for notes on the case, with objective and subjective findings. He is given also a card bearing name and date, which he is to keep to be handed in at the filing-room at subsequent visits, so that the proper "letter" may be given him. He now passes to the new-patients' waiting-room to await his turn to be called to the surgeon.

Each surgeon has a clinic of his own, and an equal number of new patients is allotted to each surgeon daily. The patient remains under the care of the same surgeon at any future call he may make. Surgeons' notes of in-patients are bound in volumes annually, and carefully indexed for future reference. Out-patients' "letters" are arranged alphabetically and placed in a special filing-department for many years, so that they are readily obtainable should any demand be made for them in the future. Three hundred fifty-two filing cases are kept in this room, and each has sufficient space for 1,000 "letters."

Usually, new patients are first attended unless an old one is in such condition that he demands immediate attention.

The surgeon determines whether the person should, or should not be, admitted as an in-patient. If he has an affliction which a simple remedy will relieve, a prescription is written on his "letter" (after the facts in the case have been recorded). He is referred to the dispensary, where he receives medicine without payment. If it is a case for refraction, or one that requires

some time for examination, he is escorted to a room especially arranged for these cases. Minor operations are performed in a room which joins the out-patient department.

Leading off from the new-patients' waiting-room is a large dark-room divided into stalls which will accommodate 18 patients at a time. After vision is taken and refraction completed the findings are recorded on his "letter." If lenses are needed he is escorted to the spectacles department where he obtains glasses at a nominal price. Whenever it is possible and circumstances will permit, if a patient complaining of asthenopia is less than twenty or twenty-five years of age, H. & C. is withheld, the patient given a one per cent atropine ungt., and advised to apply it inside of the lower lids with a glass rod three times a day for a week. At the end of that time he is to return for the refraction. There is no hurrying through of patients, as there is sufficient space and plenty of surgeons and assistants to care properly for all who apply for treatment.

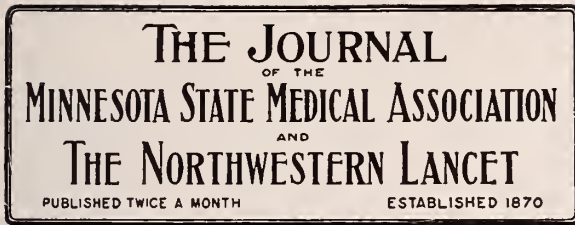
If the parents of a child are given an ointment to be applied as directed to the lids of the child's eyes, after being carefully shown the method of application, the child returns at the set time, and if there is reason to believe that the ointment has not been used as directed, a district nurse is sent to the home, and the child is subsequently well attended.

The total number of in-patients for the year ending December, 1910, was 2,128. Out of the 138 beds, 118 are at present available. The daily average number of beds occupied was 105. The new out-patients numbered 50,484, and the total attendance was 118,963. The average daily number of out-patients was 390.

Patients come from every part of England to this national charity. Clinical instruction is given in both the out-patient department and the operating-theatre, and students are privileged to attend the lectures and demonstrations. The practice of the hospital is open to students of medicine and to qualified medical practitioners.

Much attention is paid here to asepsis, and much stress is put upon pyorrheo alveolaris as a causative factor in eye-disease.

A visiting doctor or student is well treated, and if he shows an interest in the work the surgeons are only too willing to impart of their knowledge and to show and give him cases for examination and treatment.



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Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

SEPTEMBER 15, 1911

MINNEAPOLIS SCHOOL-INSPECTION

The annual report of Dr. C. H. Keene, Supervisor of Hygiene and Physical Training, is a strong argument in favor of inspection in public schools. The members of the Board of Education were evidently impressed by the findings, and they have decided to adopt the recommendations embodied in the report. This means the employment of twenty physicians and twenty nurses to inspect all of the schools in the city of Minneapolis.

There was a difference of opinion among the members of the Board as to the necessity of employing so many physicians rather than a smaller number, and some members wished to increase the staff of nurses. This point is one for discussion. In some cities more nurses than physicians are employed with the idea that the nurses' follow-up system is more advantageous, but in a city the size of Minneapolis, and particularly during the inauguration of such an extensive system, it seems wiser to employ physicians until the whole population of the public schools has been thoroughly inspected. After the methods are thoroughly established it may be as well to employ more nurses than doctors.

One of the members of the Board thought that it would be impossible to obtain competent medical men at \$75.00 per month, but this argument cannot hold good, as has been proven by

the work of the inspectors since January 1, 1911.

The work of inspection has covered seventeen schools, divided into seven districts. In the five months that the work has been going on there were 19,083 inspections made, of which 7,107 were physical examinations. The balance of the pupils were suspected of having contagious diseases, and 1,484 pupils were excluded from the schools for a short time.

Of those given physical examinations, 72 per cent were found defective; 35 per cent suffering from hypertrophied tonsils; 32 per cent from defective teeth; 28 per cent from adenoids; 24 per cent from enlarged glands; 18 per cent from defective vision; 10 per cent from anemia, and 6½ per cent from malnutrition. In all, 3,873 cases were treated, many of which Dr. Keene says would not have been cared for if not discovered in the inspections.

Contagious diseases decreased among the inspected schools and increased among schools not inspected. Twenty-one cases of tuberculosis were found and cared for.

The inspection of seventeen schools cost \$5,000, a modest sum, and the results were so satisfactory that the Board of Education did not hesitate to ask the tax-levy board for money for the entire system.

School principals and teachers are convinced that inspection is a good thing, and that it brings the teachers in closer touch with the families of the children. Parents are more favorable now that they have seen the advantage of the system in actual working order.

The Board of Education now favors more sanitary buildings, and they will also ask for \$16,000 to provide suitable care for defective and backward children. If the people knew how much good had been accomplished through the University Free Dispensary in the care and treatment of inspected children whose parents were unable to pay for other medical attention, there would be less opposition to doctors and their efforts to benefit the public health. This sort of argument, practical evidence of the value of school-inspection, is the strongest that can be advanced.

Can the League for Medical Freedom answer such figures? This body has flooded school principals and teachers with literature and circulars asking them to oppose medical inspection. One principal promptly replied to a circular saying that the discovery of head-lice through inspection alone convinced him of its value, and he in-

timated that if the League for Medical Freedom wanted lice in their own heads they could have them and go hang, but that he preferred clean children in his schools.

The real progressives will move while the antis cry at the door in their efforts to prevent health reforms.

THE ORATIONS AT THE MINNESOTA STATE MEDICAL ASSOCIATION MEETING

The first question, and a very important one, that confronts the committee making up a program for a state association meeting, is, Who shall be the orators? These two addresses have come to mean much in our state meetings, and the orator who fails to bring to his audience something of real value, whether it be new ideas or a new and helpful statement of old ones, causes keen disappointment in his failure to measure up to the opportunity and the demands of the occasion.

The program committee of the Minnesota Association, which meets in St. Paul next month, may well congratulate itself upon its choice of the orators for the occasion. Dr. Sippy, of Chicago, has made an exceedingly fortunate choice of subject, one of the greatest possible interest and importance to every general practitioner, and, we are sure, Dr. Sippy will handle it in a most interesting and instructive manner.

Dr. R. H. Sayre, of New York City, has selected a subject of narrower limits, as was to be expected in the oration on surgery; but Dr. Sayre's reputation is too well established to lead us to expect a commonplace treatment of any subject selected by him.

The two orations will, no doubt, be masterful presentations of these two important subjects on the program, and it is worth any physician's or surgeon's time to come from any part of the state to hear these orations.

In the publication of the program in our last issue we were so *unfortunate* as to have substituted the name of Dr. Beckman for that of Dr. Sayre as the orator on surgery. The reader will naturally ask, How could such a mistake occur in a well-regulated office? How, we ask, Yankee-like, in return, does a surgeon sometimes leave in his patient a piece of gauze, a sponge, an instrument, his hat, or his cane? Of course, his assistant did it, and so did our assistant make this annoying blunder. But how, you ask,

make such a stupid one? To answer your insistent question, he did it in this way:

The copy for the program came to us when the forms were ready for the press, and to save delay to the presses, we read only the page proof. We found Dr. Beckman's name spelled Boeckman. This mistake was noted on the page proof, the correction was made on the type-setting machine, and the "slug," or line, replaced, supposedly in its proper place; but, lo, the wrong "slug," two lines above in the page, was taken out, the new one inserted, and the annoying error was there.

Do you still ask the cause? Primarily, it was due to the evolution in the spelling of Dr. Beckman's name. Had he been gracious (to us) enough to retain the original spelling, as have the Drs. Boeckman of St. Paul, this error would not have occurred. Secondly, the evolution in printing has made it necessary to set an entire line when only one letter in that line needs to be changed, and thus such errors are made possible, and the possible, even though wrong, too often occurs. Thirdly, but why go on? We have placed the blame upon the other fellow, and he cannot reply; and all this is human-like, as was the mistake, and we shall go on making more of them. But do not forget to hear Drs. Sayre and Sippy at the State Association meeting.

DEDICATION OF THE NEW UNIVERSITY HOSPITAL

The new Elliot Memorial Hospital, the first unit of the clinical-hospital buildings in connection with the College of Medicine and Surgery of the University of Minnesota, was formally dedicated and opened for the reception of patients at Minneapolis, September 5, 1911.

The dedication exercises took place in the large chapel of the Library building and were presided over by Dean F. F. Westbrook.

Dr. George Vincent, the new president of the University, delivered the dedicatory address. Dr. J. E. Moore gave a history of the hospital, its inception, building and equipment. Mr. E. L. Carpenter, of Minneapolis, spoke in a modest but suggestive way for the donors who supplied the funds for the land. Dr. Charles Lyman Greene gave an outline of the value of a teaching hospital in connection with the University. Mr. Frank Elliot, a brother of Dr. Elliot, for whom the hospital is named, gave in his address the important incidents in the life of Dr. Elliot. He referred to his brother's wish that a part of

his estate should go to the University of Minnesota, and he told of the great pleasure that the remaining members of the family felt in the erection of the memorial building. Dr. W. J. Mayo, one of the Regents, told of its value as an asset to the state. Dr. R. C. Egan, of Eyota, and Dr. H. L. Tuohy, of Duluth, spoke for the alumni, and Dr. R. O. Beard gave a clear outline of the work and worth of the training-school for nurses.

The audience, composed of several hundred people, among whom were many of the medical alumni, marched in a body to the new building, stopping for a moment to witness the laying of the corner-stone for the new Anatomy building. The memorial tablets, one commemorating the gift of money from the Elliot estate through Mr. Trask, and the other with the names of the donors of the land, were unveiled and the keys of the building were placed in the hands of the Superintendent, Dr. L. D. Baldwin.

The hospital building is a model of its kind, with all modern improvements, conveniences, and equipments. It is roomy and comfortable, and commands a view of the Mississippi River and environs that is unsurpassed. The surgical rooms are large and contain air space and seating space for a large body of students.

The housing of the patients and the arrangement of the halls, elevators, wards, diet-kitchens, and laboratories, are ingenious. At each end of two floors are enclosed solaria that will give much comfort to hospital patients.

No hospital in either of the Twin Cities is so attractive, either in location or construction, and this modern building is for the benefit of those who cannot afford to go to any other than a municipal hospital.

It would seem as if this new building, with its sole purpose to care for the sick poor and to supply teaching facilities to medical students, would stimulate men of wealth to add to it by erecting smaller pavilions for the treatment of special disorders.

By virtue of his office and his interest in special work, the editor of *THE JOURNAL-LANCET* would like to suggest (from the roof of this new building) that some man of means give the sum of fifty thousand dollars for the erection and equipment of a psychopathic hospital. Such a building is sadly needed for the relief of many sufferers and would be of as much service as the pavilion for surgery or internal medicine.

While the members of the hospital committee, who have worked so long and faithfully, are rejoiced to see the completion of this new building, they are ready to give more time to the man who will donate, or who finds some other man who will give, money for the erection of the second building.

The new building will accommodate about 130 patients; and the faculty dream of the time when they shall have from 500 to 1,000 beds at their disposal.

The alumni will have to keep in close touch with their representatives in the legislature, in order that the latter may be educated in providing money for more buildings and for maintenance.

THE SPECTATOR

Yesterday we hoed field rows of growing things planted for the service of man. And this is one thing we found,—little Son and I,—vile weeds crowding in on four sides of the food-plants, weeds prepared to smother every valuable item in the row. We noted particularly the pigweed, most ubiquitous, riotous, abounding, pestilent plant, a plant with a most vulgar surplus of vitality. We noted the provisions made by Nature for the preservation and propagation of the pigweed species. A normal pigweed can produce probably 200,000 seeds, each clad in weather-proof armor and stocked with oily provision to withstand a siege of years till conditions shall call it up into growth. This weed sends out long, lateral thread-like roots in moist weather and sends down a well-anchored tap-root in dry weather. Cut it, and it cheerfully continues to grow. Pull it up, leaving only one far end of a root filament in the soil, and there it lies green and smiling in the hot sun to mature its seed and get even with you. Keep your field clean till frost, and some belated seeds will push up, form mature fruit, and so beat you by a short head on the very quarter stretch. Everything you sow for your support must be nursed and nourished if it comes to profitable maturity. If it produces a hundredfold it is a wonder. But this weed and many of its companions in crime can take field-luck against man and the elements, and yet yield ten thousandfold without half trying.

Reckoning that this world is made and run by a beneficent Being, how shall we account

for the pigweed? Why this persistent surplus of the undesirable? Why is it that we rarely see good things in superabundance, barring perhaps fruit on the Pacific Slope? Why is it that the measly aphid that sucks the life-sap of your dearest plant can be the mother of a million aphids in one season? Some of these aphids are hatched from eggs, some born whole, some made with wings to get over onto the next row of apple-trees, and some without wings to sit and kill the tree they were born on. Some are toted by the ant to fresh pastures on some clean tree, and the late-fall hatch are protected with a winter-proof armor. Who but the devil could devise such villainy?

And why are some of the half-good things so plentiful? Why did I a few weeks ago have the doleful duty of snuffing out a batch of kittens, and why, for a surety, must I be compelled to do a like task a few weeks hence? And why is it that less than half the eggs that go under the hen show up at the end of the summer as edible birds? Why doesn't my cow and why don't my chickens bring forth as does my housecat?

Little Boy and I discussed this problem as we dug out the pigweeds. He said this: "If you could get cabbages and corn by just throwing the seed into the ground once in ten years, and if pork was as easy as kittens, nobody would need to hustle. We'd all be lazy." I agreed with him; but, just the same, I wish the pigweeds of life would let up for a year or two till I had finished some of the accumulated beneficent activities now laid by for a more convenient season.

And yet evil in the world is not, on the whole, as vital and as violently productive as the pigweed. Evil sometimes smothers itself by its own luxuriance, just as army-worms die of their own abundance. Indeed, I have seen aphids sucking the life out of pigweeds, and thieves turning state's evidence against murderers. Virtue is wonderfully vital. One of the ten old rules of right living says that God visits the iniquities of the fathers upon the children unto the third and fourth generation, and lets it run out at that; but that the virtue of the fathers is enjoyed unto thousands of generations. Reckoning up the sins against the body that are chargeable to the human race since the fall of Adam, there is but one theory to account for the existence of a single human being on earth, and that is the theory of God's abounding mercy.

Possibly, some things in human pathology

tend to confuse the man who is looking for an all-wise Designer of the world. Our old family physician used to say that had he been there when man was made he could have offered some helpful suggestions. But maybe not. Maybe the first man was not at all in need of mending or of re-making. There are some now living that seem to be about as good physically as can be made. It may be that all the kinks and crooks now found in the human body are the result of human deviltry, near or remote.

For one's peace of mind and health of body; for the steadiness of the hand in surgery and the clearness of the vision in diagnosis, it is probably just as well to assume that this world is in the hand of the Father as set forth by our Lord in the four gospels, as to think that the devil, or some blind force like dynamite, or compressed gas, or politics, has supreme control of us and ours.

REPORTS OF SOCIETIES

JOINT MEETING OF SOUTHERN MINNESOTA MEDICAL ASSOCIATION AND MINNESOTA VALLEY MEDICAL ASSOCIATION.

Agreeable to announcement, the joint meeting of the Southern Minnesota Medical Association and the Minnesota Valley Medical Association, was held at Rochester, August 3, 1911. As anticipated, proper resolutions were passed, which dissolved both the above associations, and a new organization was effected, and a new constitution and by-laws was at once adopted, thus bringing into life a new and larger organization. The new society was christened, as seemed pertinent, "*The Southern Minnesota Medical Association*."

It is anticipated that this Association will serve, as the old associations have done, to bring a closer feeling of friendship and better social relations among its members, besides giving a widely extended opportunity for the advancement of the scientific accomplishments of the profession.

There are to be two meetings each year, the annual meeting to be held in Mankato on the third Tuesday in January. This arrangement is made on account of the excellent advantages of Mankato as a railroad center. The semi-annual meeting will be held on the first Tuesday after

the first Monday in August each year at such place along the railroads as may be determined at the annual meeting. By this arrangement, every member will be able to attend one or both meetings.

All members in good standing in both the old associations will be entered as such on the roster of the new association.

The meeting is conceded to have been one of the best ever held in Southern Minnesota, and, in fact, it was equal to any of the state meetings.

The morning session at St. Mary's Hospital was crowded with interest, and the painstaking care with which the Hospital staff had prepared their program, was fully appreciated. No less so was the very excellent banquet given the profession by the Sisters of St. Mary's. One hundred and fifty covers were laid, and the doctors ate as only doctors can, which is the highest compliment that can be paid to their hostesses.

The afternoon session at the State Hospital was full of interest, and the program was carried out as published almost without exception.

Dr. Hatch, on account of a severe illness, was unable to be present, and Dr. H. F. McGaughey, vice-president, occupied the chair. Dr. Hatch's paper, "The Patient," which was the president's annual address, was read by Dr. J. H. Adair. The program closed with a most interesting clinic with demonstrations of brain and mental disease, by Dr. A. F. Kilbourne and his staff, and was highly complimented.

The day was closed in a very appropriate way, with a most excellent dinner served in the dining-rooms of the State Hospital, under the courtesy of Dr. Kilbourne. More than ninety guests were served, and the occasion was one long to be remembered.

The following officers were elected to serve until the time of the annual meeting, which will be held at Mankato, January 16, 1912: President, Dr. L. A. Fritsche, St. Peter; 1st vice-president, Dr. J. E. Crewe, Rochester; 2d vice-president, Dr. H. F. McGaughey, Winona; secretary, Dr. W. T. Adams, Elgin; treasurer, Dr. G. F. Merritt, St. Peter.

W. T. ADAMS, M. D., Secretary.

BOOK NOTICES

A MANUAL OF THE DISEASES OF INFANTS AND CHILDREN. By John Ruhräh, M. D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Illustrated; third edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company, 1911.

This manual is one of the class between the compend and the larger texts. That there is a demand for works of this character is shown by their growing number. The style which such a work requires is necessarily somewhat sketchy, but it is handled very well. It is to be regretted that some of the most valuable results of modern pediatrics in the feeding of infants have not been included. In fact, the cream or top-milk methods are too closely adhered to. A few errors may be noted, such as the confusion of congenital myatonya and myatonia congenital. This, however, is more the fault of the similarity in the two names.

The article on tetany disregards the work of Escherich, Thiemich, and others, thereby losing for the reader the value of the modern therapeutic methods.

It is a pleasure to note that even so small a work is copiously supplied with references which enable the student to seek further. The illustrations are numerous and good. Being bound in a flexible leather it makes its use as a manual more easy.

The article at the end on pediatric literature and the methods to be used in the library gives information which every student should have.

A TEXT-BOOK OF SURGICAL ANATOMY. By William Francis Campbell, M. D., Professor of Anatomy at the Long Island College Hospital. Second edition, revised: octavo of 675 pages, with 319 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.00 net; half morocco, \$6.50 net.

This book is for the aid of the student and practitioner, the learner and the follower, and well does it fulfill its purpose. Its language is clear and concise, and its subject-matter is comprehensive.

The volume covers the whole field of anatomy in a logical and interesting manner, following neither the text-books of anatomy so closely as to be intricate reading, nor the surgeries so fully as

to place it within that class of literature, but adding only enough that is salient of each, so as to make it valued not only as an instructive work but also as one easy to read.

The illustrations accompanying the text, both real and schematic, chosen as they are to elucidate the special points of anatomy, add materially to the practical value of this book.

In selecting "regions for especial emphasis on account of surgical learning" the author has shown very good judgment, and the only criticism that can be offered, if criticism it can be called with its purpose in view, is that it lacks at times some of the details which would make it even a more valuable reference book—details which added would still not put it into the class of books too bulky and cumbersome to have at your very elbow for constant use.

DIAGNOSTIC AND THERAPEUTIC TECHNIC. By Albert S. Morrow. Philadelphia and London: W. B. Saunders Company, 1911.

This is a book that seems destined to be of great service to the physician doing general work. The author has followed his text closely, and the work, as a whole, presents many features to commend it. It presents practically nothing new, and it is this gathering of the data into one book that gives the work its main reason for existence.

The author, by placing the modes of procedure in diagnosis and therapy in so excellent form, encourages the physician to use them in his work, and, in cases where the diagnostic technic is more difficult, to refer them to men skilled in this line.

A word of caution should really go with such a book. Many of the more difficult procedures in diagnosis and therapy require very thorough preparation and constant practice to attain the proper skill and the necessary manual dexterity. The physician should therefore exercise proper judgment and not attempt too much.

The carefully selected and well-executed illustrations are a great aid to the text.

URIC ACID: The Chemistry, Physiology, and Pathology of Uric Acid and the Physiologically Important Purin Bodies, with a Discussion of the Metabolism in Gout. By Francis H. McCrudden. Paul B. Hoeber, Medical Books, 69 E. 59th St., New York.

This monograph of 309 pages contains a very thorough review of the literature of the chemistry, physiology, and pathology of uric acid and the important purin bodies. A larger

part of the work is given to the study of the chemistry of uric acid. The author states that the methods used by the early investigators were inaccurate, and that, consequently, many of their conclusions are not well founded. He concludes that no foundation exists for the belief that rheumatism is due to a faulty metabolism of uric acid, and that further evidence is needed to determine its relation to the causation and symptomatology of gout.

This monograph is a valuable study of the relation of uric acid and the purin bodies to the metabolism in man, in health and disease.

WHAT TO EAT AND WHY. By G. Carroll Smith, M. D., Boston, Mass. Philadelphia and London: W. B. Saunders Company, 1911.

The general principles outlined in this excellent volume should be a valued addition to any medical library, particularly to that of the general practitioner. Its presence would prove a wholesome reminder that proper food, fresh air, pure water and good cheer are essential adjuncts to, and ordinarily safe substitutes for, drug therapy.

To make the punishment fit the crime by giving a dose for every complaint, is a habit too easily acquired by the busy practitioner, too eagerly accepted by the average patient, and shows from one's daily mail no sign of discouragement from the pharmaceutical houses.

The general principles of a scientific diet are here carefully elaborated and applied to a number of conditions in which dietary guidance is particularly beneficial.

The work is far more than the usual diet-list and table-of-fuel values. In scientific feeding the patient often is forced to fit a tabulated schedule. A sincere effort is made in this work to fit a proper diet to the patient, emphasizing the fact, proved by Pawlow, that appetite, flavoring, and individual tastes or dislikes largely affect the actual nutriment value of any diet.

Some individual opinions of the author do not accord with accepted ideas. The inference that young men who have drunk alcohol "even in moderation" are promptly affected with arteriosclerosis; the unqualified statement that pulmonary tuberculosis is a curable disease; that the "main object in dietetic treatment of chronic nephritis is polyuria"—might be open to question.

Of necessity, evidences of the too ardent enthusiasm of the specialist are occasionally encountered. Surgeons will certainly share our

objection to the emphasis laid upon the dietetic treatment of acute appendicitis.

On the other hand, it is refreshing to note an opinion in recent literature on typhoid diet that there is sufficient nutritive value in eggs, milk, and broths to make a forced diet of meat and potatoes unnecessary.

The introduction and the sections on "Emaciation," "Obesity," "Constipation" and "Diabetes Mellitus," are particularly good.

SPIROCHÆTES: A REVIEW OF RECENT WORK WITH SOME ORIGINAL OBSERVATIONS. By Cecil Bosanquet, M. D., M. A. London and Philadelphia: W. B. Saunders Company, 1911.

Readers of English medical literature should welcome and encourage the production of monographs. In looking over Bosanquet's "Spirochætes" we can congratulate ourselves that we have such an attempt in English. It is fuller and more satisfactory, if not so complete in its academic detail, than Doflein's "Die Natur der Spirochæten," recently published.

It is surprising that the author in his travail over the pathogenicity of *spirochæta pallida* (*treponema pallida* of Calkin) is not acquainted with the fact of the virulency of gummata. After tracing the biochemical reactions of some of the pathogenetic spirochætes it is again a matter of surprise that he does not allude to chemotaxis, so abundantly amplified in the studies of Uhlenhuth, Ehrlich, and others.

Aside from a certain number of omissions of a polemic nature, unavoidable when writing in monographic form, the book is a real addition to the pathologist's library.

The illustrations, as well as the groupings of the subject, are excellent, and the bibliography is worth while.

STUDIES IN CARDIAC PATHOLOGY. By George William Norris, A. B., M. D., Associate in Medicine at the University of Pennsylvania, Etc. Philadelphia and New York: W. B. Saunders Company, 1911.

This is an interesting collection of 85 photographic plates of gross cardiac lesions. The original specimens were selected from the museums of five of the most important Philadelphia hospitals. The text is "mainly in the form of an explanation and an elucidation of the illustrations." It is an exceedingly valuable monograph for all who are interested in internal medicine.

NEWS ITEMS

Dr. A. C. Tanner has moved from Faribault to Federal Dam.

Dr. J. B. Lewis, of St. James, has moved to South St. Paul.

Dr. John Kruse, of Bozeman, Mont., died last month at the age of 76.

Dr. P. E. Brandon, of Jackson, has been doing post-graduate work at Chicago.

Dr. J. J. Gelz, who has been practicing for some time at Buffalo, has moved to Richmond.

Dr. H. A. Buell, of Chippewa Falls, Wis., has become a member of the staff of the hospital at Ely.

Dr. C. A. Thulien, of Halstad, and Miss Rachael Schou, of the same place, were married last month.

Dr. H. J. Lindsay, who has practiced at Scranton, N. D., for the past three years, has moved to Canada.

Dr. F. L. Hammerstrand, of Rankin, Ill., has purchased the practice of Dr. O. O. Benson, of Sacred Heart.

The new hospital at Marble, built by the Oliver Mining Co., will be ready for occupancy by Oct. 1st.

Dr. A. E. Johnson, of Red Wing, who has been doing post-graduate work at Chicago, has returned home.

Dr. E. W. Feige has resumed practice at Woonsocket, S. D., after an absence of several years from that place.

Dr. Koren, of Appleton, has moved to Madison and become associated with Drs. Giere & Johnson of that place.

Dr. W. A. Delaney, a recent graduate of Creighton, has become associated with Dr. E. E. King, of Mitchell, S. D.

Dr. Gustav A. Renz, of St. Paul, has returned from Europe, where he has been for the past six months studying in Vienna.

Dr. J. H. McClanahan has resigned his position as assistant at the Shipman Hospital, Ely, and has moved to White Bear.

Dr. G. I. Kheiralla, of Lake Preston, S. D., has moved to Rapid City, S. D., and become associated with Dr. Gilbert of that city.

Dr. J. E. Dempsey, of Kellogg, has moved to Ellsworth to take up the practice of Dr. Charles A. Gill, who will move to Madison, Wis.

Dr. A. H. Sanford, professor of physiology in the medical department of Marquette (Wis.) University, has resigned to accept work in the laboratory of St. Mary's Hospital at Rochester.

Dr. Smith, the health officer of Fargo, N. D., proposes to revise the health ordinance of the city. He especially desires to have physicians report all cases of contagious disease, which many physicians seem loth to do.

The entire press of the Northwest is commenting, in news and editorial columns, on the failure of the authorities to prevent John Till from practicing medicine. A few papers see the serious consequences to the ignorant patients of the man, and comment accordingly; many fail to see in the whole business anything but the jealousy of medical men.

The new Elliot Memorial Hospital at the University of Minnesota was dedicated on Sept. 5th, and a new epoch in the history of medical education in the Northwest was marked. It would be difficult to exaggerate the value of this teaching hospital to the medical profession and to the people of the Northwest. The dedicatory services were full of human interest.

St. John's Hospital of Helena, Montana, has won a victory in the district court which, if sustained by the supreme court, is full of meaning. The Hospital admits only physicians who belong to the county medical society of that county, and this is done on ethical grounds. In mandamus proceedings last month, a physician not a member of the medical society, attempted to get a patient into the hospital. The court denied the order.

The U. S. Civil Service Commission will hold examinations on Sept. 20 and Oct. 18 in every state for the purpose of obtaining trained nurses, men and women, for the Isthmian, Indian, and Philippine service. The examination will be held at Crookston, Duluth, Fergus Falls, Mankato, and St. Paul for Minnesota applicants; at Bismarck, Fargo, Grand Forks, Minot, and Pembina for North Dakota applicants; and at Aberdeen, Deadwood, Pierre, Sioux Falls, and Wattertown for South Dakota applicants.

PHYSICIANS LICENSED AT THE JUNE (1911) EXAMINATION TO PRACTICE IN SOUTH DAKOTA

Bilger, Frank W.	Admore, S. D.
Brooks, Cleveland	Pierson, Iowa
Childs, L. H.	Deadwood, S. D.
Delaney, Wm.	Marcus, Iowa
Egon, Alonzo	Olivet, S. D.
Elward, L. R.	Athol, S. D.
Foshager, H. T.	Ipswich, S. D.
Gibb, Wm. Blake.....	Cavour, S. D.
Hare, Carlyle	Kenstone, S. D.
Lambert, Scheyler	Onida, S. D.
McClellan, S. A.	Kenebec, S. D.
Mizener, Mark	Ethan, S. D.
Murphy, I. J.	Duluth, Minn.
O'Donnell, Dennis.....	Huron, S. D.
Pinard, C. H.	Jefferson, S. D.
Quinn, R. J.	Eureka, S. D.
Ranney, T. P.	Chicago, Ill.
Richman, S. H.	Yankton, S. D.
Scheffler, Felix	Geddes, S. D.
Twining, G. H.	Mobridge, S. D.
Verity, Walter	Beresford, S. D.
Whitman, F. S.	Omaha, Neb.
Wildish, R. M.	Blunt, S. D.
Zimmerman, Goldie.....	Aberdeen, S. D.

FOR SALE

Cadillac coupe automobile, in perfect condition, new tires; an ideal car for a physician. Costs \$2,200.00. A bargain for quick sale.

H. M. Stocking, 35 Eastman Bldg., Minneapolis.

PRACTICE AND DRUG-STOCK FOR SALE

My medical practice and small drug-stock are offered for sale. In county town 170 miles from Twin Cities; competition 10 and 20 miles away. A money-maker for the right party. Must sell because of sickness. Address H. E., care of this office.

CITY PRACTICE FOR SALE

The practice of the late Dr. J. T. Moore, of Minneapolis, with office fixtures, instruments, static machine, drugs, etc., is for sale cheap. Dr. Moore's work included a large office and prescription practice, much of which can be held by his successor, as can much of his family practice. For particulars address Mrs. Francis Moore, 406 Masonic Temple, Minneapolis.

FINSEN LIGHT OUTFIT FOR SALE

My outfit cost \$3,500; can be bought for mere fraction of value owing to death of owner: in use until recently and in perfect order; fine opportunity for physician wishing to take up treatment of skin diseases; also large static machine for generating electricity. The Finance Company of Minnesota, 633 Andrus Bldg.

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

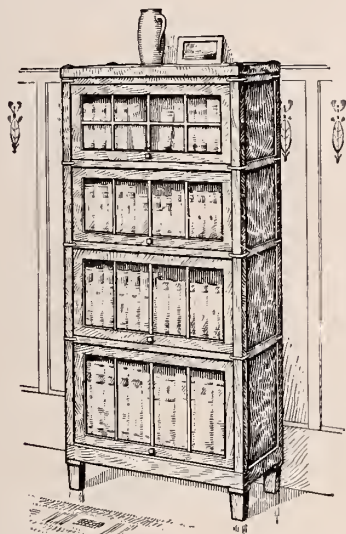
VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	acute Anterior Polyomyelitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	1													
Aitkin	1,719	1,638	2	1												
Akeley			0													
Appleton	1,184	1,221	1	1												
Belle Plaine	1,121	1,204	4													
Biwabik		1,690	3	1												
Bovey		1,377	0													
Browns Valley	721	1,058	0													
Buffalo	1,040	1,227	0													
Caledonia	1,175	1,372	1													
Cass Lake	546	2,011	1	1												
Chisholm		7,684	5			1					1			2		
Coleraine		1,613	0													
Dawson	962	1,318	0													
Delano	967	1,031	1													
Farmington	733	1,024	1	1												
Fosston	864	1,055	*													
Frazee	1,000	1,645	2													
Glenwood	1,116	2,161	0													
Grand Rapids	1,428	2,239	1													
Hibbing	2,481	8,832	6			1		2				1				
Jackson	1,756	1,907	2	1		1										
Janesville	1,254	1,173	1													
Kenyon	1,202	1,237	1													
Lake Crystal	1,215	1,038	2		1											
Long Prairie	1,385	1,250	5											1		
Madelia	1,272	1,273	0													
Milaca	1,204	1,102	2													1
Mountain Lake	959	1,081	0													
Nashwauk		2,080	1													
North Mankato	939	1,279	3		1											
North St. Paul	1,110	1,404	0													
Osakis	917	1,013	1						1							
Park Rapids	1,313	1,850	1			1										
Pelican Rapids	1,033	1,019	0													
Perham	1,182	1,376	1										1			
Pine City	993	1,258	1								1					
Plainview	1,033	1,175	0													
Preston	1,278	1,193	1													
Princeton	1,319	1,555	4	2												
St. Louis Park	1,325	1,743	0													
Sandstone	1,189	1,818	3											1		
Sauk Rapids	1,391	1,745	1											1		
South Stillwater	1,422	1,343	1	1												
Springfield	1,511	1,442	1												1	
Spring Valley	1,770	1,817	2													
Wadena	1,520	1,820	3													
Wells	2,017	1,755	1													
West Minneapolis	2,250	3,022	2													
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	0													
Windom	1,944	1,749	2												1	
Winnebago City	1,816	2,555	1													
Zumbrota	1,119	1,138	1	1												
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			7	2												
Rochester, Hospital for Insane			6													
St. Peter, Hospital for Insane			8	3											1	
Anoka, Asylum																
Hastings, Asylum			1												1	
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			7	1		2			3							
Owatonna, School for Dependents																
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			2													
OTHER PARTS OF STATE			634	67	9	31	3	4	9	....	8	6	5	30	36	5
Total for state			1463	167	33	66	16	9	17	....	14	7	14	63	104	7

*No report received. Registrar not doing his duty.

161 stillbirths and premature births not included in above totals.

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THESE Bookcases are designed by artists and built by craftsmen, the result being a bookcase harmonizing perfectly with the Arts and Crafts idea without sacrificing the many advantages of unit construction, while at the same time eliminating entirely the sectional appearance.

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WE carry a complete line of "Macey" cases in all the prevailing styles and shall be pleased to send booklet explaining the many advantages of these modern Bookcases.

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*Complete Furnishers of Homes, Offices,
Hotels, Clubs, Churches, Theatres
and Public Institutions*

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PUBLISHER'S DEPARTMENT

OTTAWA TENT COLONY

Many physicians in the Northwest are sending their tubercular patients to Colorado, Arizona, Mexico, and other southern points. This is often done at large expense and great inconvenience to the patients.

We believe the Ottawa Tent Colony, of Ottawa, Ill., is a better resort for all such patients than any of the above points. If this should not prove true in every case, there is no better man in America to send such patients to than Dr. Pettit, a recognized authority in the care and treatment of such patients. It would be very safe practice to send such patients to Ottawa as a half-way house, where they could stop for rest and consultation, and then decide whether to go further south. We do not believe one of them would go further.

Dr. Pettit's announcement appears regularly among the sanitarium cards in our columns.

MUDCURA SANITARIUM

When Dr. H. P. Fischer opened his health resort at Shakopee, Minn., only three or four years ago, he hardly dreamed that its popularity would be in a dozen years what it is today.

Sulphur water and mud baths, given under intelligent medical supervision, do a work in certain well-defined and very common conditions that can be done in no other way; and the relief to many patients is so immediate and so great as to be almost unbelievable.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, OCTOBER 1, 1911

No. 19

EMPYEMA OF THE GALL-BLADDER*

BY B. A. BOBB, M. D.

MITCHELL, S. D.

Owing to the fact that Dr. Cottam presents to you a paper on surgery of the gall-bladder and accessory ducts, I shall try to limit my remarks as far as possible to my subject, although slight trespassing must be done, in order to make myself plainly understood.

By the term *empyema of the gall-bladder* is understood a condition in which there is an accumulation of pus within its walls.

Etiology.—The primary cause of an empyema located here is usually some obstruction of the cystic duct, followed by an infection due to the presence of certain bacteria or cocci, usually the bacillus coli communis, but it may also be in conjunction with the staphylococci, pneumococci, or streptococci, etc. Occasionally an empyema of the gall-bladder follows a typhoid infection without a total obstruction of the ducts; however, there is usually an obstruction of the cystic duct, and this may be due to one cause or to a combination of causes, as, impacted stone, stricture due to ulceration caused by stones, to kinking of ducts, pressure from an enlarged lymphatic gland, or to new growths or to adhesions from malignant diseases in the immediate vicinity of the gall-bladder.

The gall-bladder, when embarrassed by one of these conditions or a combination of two or more of them, gradually or suddenly enlarges and becomes filled with mucus, bile, crystals of cholesterin, etc.; and the bacillus coli communis is most always present. Now, if the infection is not virulent and the cause is soon removed, the condition of the over-distended gall-bladder

is simply one of hydrops, which is not a serious condition and soon subsides. However, should the infection be more virulent and the obstruction not soon removed, we have a condition quite liable soon to develop into an empyema of the gall-bladder.

Moynihan says that "the clinical conditions associated with the empyema vary greatly in severity and are in direct proportion to the intensity of the infection; in the more chronic forms the symptoms may be but little more acute than in hydrops, while in the most acute they are so grave that a fatal result may occur within a few days, all depending upon the virulence of the infection."

It is an undisputed fact that a majority of the bacteria that enter the gall-bladder have their source in the intestine, and thence through the portal circulation into the liver. The blood of the portal vein always contains bacteria. Under conditions of health they are partly or wholly destroyed in the liver, and the bile is sterile or contains but few bacteria. In the condition which leads to gall-stone disease the liver fails to remove all the bacteria, and an infection of the biliary passages may take place.

The pathological conditions here are the same as exist elsewhere where pus forms,—thickened walls and more or less destruction of the mucosa and tissues in general.

Symptoms.—As Dr. W. J. Mayo has pointed out, the reason that sometimes we do not have all the characteristic symptoms is that the gall-bladder possesses but very few lymphatics, and readily distends as its contents accumulate and

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

are dammed back by the combined influence of the inflammatory swelling of the mucous membrane and the obstructive effect of the stone. Hence the constitutional disturbances, such as fever, increased pulse-rate, etc., may not be marked because of this deficient supply of lymphatics. Of course, as soon as sufficient destruction of tissue takes place, by pressure or otherwise, then we have the more manifest symptoms; but occasionally the infection is more severe or malignant in character and the impaction of the stone marked, and ulceration takes place affecting the muscular coats of the gall-bladder, and the constitutional symptoms are marked, as a temperature of 103° , very rapid and feeble pulse, etc., and symptoms of collapse may supervene. Great pain and tenderness are usually present. We also find upon examination a varied condition present. Sometimes we are able to palpate a tumor of variable size below the costal margin; and, again, the gall-bladder may be so situated relative to the liver and adhesions so fixing it that it does not descend so as to be markedly palpable. Usually, however, the gall-bladder is enlarged and projects from beneath the liver; and cases are reported where it projected so far down as to form the contents of the sac of a femoral hernia. A wide range of movement of the gall-bladder is often possible, and in some reported cases the tumor is pushed over to left of the umbilicus.

Moynihan says: "The most difficult differentiation we encounter is the tumor of hydatid or malignant growth of the liver near its free edge. The perfectly smooth contour, and the absence of other irregular nodules, and the free range of mobility will generally permit an accurate differentiation to be made." In very obese individuals this may be absolutely impossible.

In severe forms we have the evidence of a severe inflammation, and a local peritonitis may ensue with a temperature of 103° or 104° , rigors and great pain in the whole upper right quadrant of the abdomen, and pain increased on deep respiration, coughing, etc., and the gall-bladder becomes adherent to the surrounding tissues and a fistula may form going into whichever organ the gall-bladder may at the time be adherent to. Jaundice is more likely to obtain in these severe cases because of the extension of the inflammation along the cystic duct to the common duct, or to a kink in the common duct due to the surrounding adhesions pulling on the same.

Treatment.—The treatment is always surgical.

Perhaps a few interesting points might be brought out by the report of four or five cases of empyema of the gall-bladder that have fallen into my hands for treatment.

CASE 1.—Mr. H., aged 56. A rancher by occupation; married; weight, about 170. For three or four months he had suffered with indigestion and general gastric disturbances; no typical attacks of gall-stone colic.

Three or four days before I saw him he developed quite a severe pain in the upper right quadrant of the abdomen. When I saw him, in June, 1907, there was vomiting; temperature 102° ; no jaundice; but a distinct swelling on the right side extending from the costal margin downward two inches below the umbilicus. Dullness was pronounced from the costal margin downward the same distance. Tenderness was so marked that it was impossible to move the tumor mass. The abdominal muscles were very rigid and board-like. The abdomen was opened, and the tumor found to be a greatly distended gall-bladder extending downward to the umbilicus. The incision was enlarged so as to admit the hand, and a stone was found in the cystic duct, which was slightly manipulated and, fortunately, was pushed back into the gall-bladder. The abdomen was found to contain about a pint of fluid, slightly milky in character, and upon examination the appendix was found greatly enlarged and contained pus, a combination not often found.

The leukocytic invasion was Nature's method of protecting the surrounding organs. The appendix removed, the gall-bladder was opened and something like 8 ounces of pus flowed out. With the scoop 150 stones were removed. Drainage was inserted in the ordinary way in the gall-bladder, and a drain was also inserted at the lower angle of the wound to the appendicular region.

Complete recovery followed.

CASE 2.—Rev. Father B. Complained for several years with pain and distress in right upper hypochondrium; pain radiating to the umbilicus and the back and shoulders. He had had two or three attacks of quite severe pain, but not quite resembling gall-stone colic. In the spring of 1908 he called at our office desiring to have an examination made.

Age 31; temperature, 99.5° ; pulse, 78. No vomiting but some nausea of late. Tender on deep pressure and palpation over the gall-bladder. Slight enlargement over the gall-bladder region on inspection; and dullness only moderately increased downward on palpation; had complained of some chills.

Upon opening the abdomen we found a tumor the size of a large pear and dark-bluish in color with very tense, thick walls. Peritoneal adhesions were numerous and difficult to break down. On opening the gall-bladder an abundance of muco-pus came out. No stones were found. As a thorough examination of the ducts could not be made, on account of dense adhesions, it was not ascertained whether the condition was one due to stones having been impacted and passed out, or to adhesions causing a kink in the cystic duct.

He had had typhoid fever about eight months before this time, but had always been well up to the time of

the typhoid fever. Drainage was done in the ordinary way, and recovery followed in sixteen days.

I received a letter from this patient less than a month ago in which he stated that he had been perfectly well since the operation, and desired a certificate from me as to the nature of the operation as he was taking out some insurance and the company required this affidavit from me.

CASE 3.—Dr. Anna W., aged 62. I was called with Dr. K., in 1909, to see Dr. W. after she had been sick for two weeks. She stated that she had had many of these attacks in years gone by, and again believed that she would recover without surgical interference. Her temperature was 103°; pulse, 124; perspiring freely and very weak, simulating very closely a collapsed condition. She was much jaundiced, and had had severe pain and vomiting for the past four days. The stools were drab-paint color. Examination discovered a tumor the size of a cocoanut in the upper right quadrant of the abdomen, which was extremely tender and not movable. Malignancy and new growths were excluded by the sudden onset, the rapid development, and the previous history with the present high temperature and pulse. The patient was taken to the hospital, and although she had to make a trip of thirty miles by rail and one mile in an ambulance she maintained her strength very well. A blood count revealed a leukocytosis of 12,000, and the polynuclears increased to 85 per cent.

On account of the severe jaundice, the coagulability of the blood was tested and found to coagulate in three minutes, so that an operation was deemed safe on this score.

The abdomen was opened, and at first sight one might have believed that he was dealing with an ovarian cyst from the dimensions and location of the tumor. Upon

enlarging the incision it was found, by inserting the hand, that the pedicle of the tumor was up under the liver, and was an enormously distended gall-bladder, and upon inserting the finger in the foramen of Winslow no stone was found in the common duct as might be expected. One large stone was impacted very tightly in the pelvis of the gall-bladder, and by a little steady working it was forced back into the gall-bladder. The gall-bladder was now opened, and more than a pint of pus flowed out. Forty-eight stones were removed. Drainage was inserted, and recovery was uneventful.

I have heard from the Doctor lately, and she states that she is feeling well and there is no inconvenience from the operation.

I have two more cases that I might report, but time forbids, save only to say that both cases recovered nicely with drainage, one having a ventral hernia as a reminder of the location of the operation.

My conclusions are—

That it is not necessary, as a rule, to remove the gall-bladder in these cases.

That drainage, if the mucosa is not all destroyed, is sufficient.

That all cases of empyema of the gall-bladder are necessarily surgical.

That if more cases of simply cholecystitis were operated on it would save the patient the larger mortality that is obvious in empyema.

FOR DISCUSSION SEE PAGE 439

SURGERY OF THE GALL-BLADDER AND ITS ACCESSORY DUCTS*

BY GILBERT GEOFFREY COTTAM, M. D.

SIoux FALLS, S. D.

The great majority of cases of gall-tract disease in which surgeons and internists are concerned, are of inflammatory origin, and with these chiefly will this paper today deal. I wish especially to lay emphasis on that great subdivision which has not yet received the recognition its importance demands. I refer to the cases which do not follow the classical lines of gall-tract-disease symptomatology, and make their presence known only by indirect manifestations. They have no hepatic colic, no well-marked jaundice, no clay-colored stools, and no local tenderness of sufficient degree to fasten attention on the biliary tract. On the other hand, digestive disturbances are fairly prominent.

There are, commonly, a marked tendency to gas-formation in the stomach and intestines, a slightly furred tongue, a muddy complexion, irregularity of bowel-movements, and, perhaps most prominent of all, headaches without obvious cause.

Patients in this class have capricious appetites and become nauseated somewhat easily. They readily develop nervous symptoms. The metabolic interference brings about heavily sedimented urines, often suggesting organic kidney disease to susceptible subjects. They are treated for eye-strain, given digestive ferments and stomachic tonics, cholagogues, laxatives and diuretics, change of climate and scenery, hydrotherapy, electrotherapy and massage, take patent medicines, and try some or all of the many

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

cults which are in our midst, while the truth of the matter is they are suffering from an ascending or hematogenous infection of the biliary tract, and will, in all probability, continue to do so until the infection, and the results of it upon the associated viscera, are adequately dealt with by surgical procedure.

The separate organs of the digestive apparatus are not independent pieces of mechanism: they are cogs of an intricate machine, the entire working of which is deranged by the defect in one part. These chronic infections of the biliary passages, in an appreciable proportion of cases, set up a corresponding condition in the pancreas, the importance of whose function to the economy can not be overstated. From being simply reflex disturbances, the condition becomes a very real one when the pancreatic secretion is interfered with by such a process as a chronic infection.

Unfortunately, neither chronic cholecystitis, cholangitis, nor pancreatitis offers any inducement to purely medicinal treatment. No drug of such selective action as to reach those organs, directly or otherwise, has yet been found. True, the drug hexamethylenamin has been found to be excreted by the bile, but the recent Johns Hopkins findings that 75 grains per day must be used, in order to obtain prompt effect in this connection, would seem to render its use prohibitive, even if it could be shown that its effect is positively beneficial, which, so far, has not been the case. A certain proportion of cases may subside spontaneously, aided by judicious diet and rest, but where the symptoms persist, in spite of these, and threaten to undermine the patient's general health, nothing is gained by further delaying the inevitable operation.

A word now as to stones: In a surgical experience of eighteen years I have never seen stone-formation in a healthy gall-bladder, and I have seen many diseased gall-bladders in which no stones existed. To my way of thinking, they are purely incidental and only become of importance when they give rise to mechanical trouble. The important thing to the patient is the inflammatory condition back of them, and I feel, therefore, that we should discontinue alluding to gall-stones as if they represented a disease entity, and should refer to them only as we would to the sputum in pulmonary tuberculosis or the sequestrum of an osteomyelitis. I have long discontinued saying to patients: "You probably have gall-stones." In the light of increased

knowledge gained by experience and observation, coupled with a recollection of the chagrin produced by an inability always to produce the stones on demand, I now prefer to say: "You undoubtedly have an infection of the bile-tract. If stones are there they can be dealt with; they make no difference either way, since the operation is equally imperative in either event."

In a certain proportion of cases some overlapping of symptoms occurs, so that only a presumptive diagnosis is possible. Inasmuch as these patients have usually exhausted the resources of the internist before seeking surgical advice there is nothing to gain by waiting. A properly planned exploratory incision will give us the much-desired opportunity to clarify the diagnosis and, if possible, apply such remedial procedure as will best fit the case. We generally find in such cases that the cause of the mixed symptomatology is a mixed pathology.

An incision moderately high through the outer third of the right rectus will permit adequate investigation of the gall-bladder and its ducts,—the duodenum, pancreas, and appendix. No incision of this character should be undertaken, however, unless one is fully prepared to deal with whatever pathological condition is found. Unfortunately, appendectomy is in many instances a very simple affair, and drainage of the gall-bladder is but little more so. These operations are frequently undertaken by those who are not ready to do a cholecystectomy or an anastomosis, and who would be wholly unprepared to remove a stone impacted in the lower end of the common duct or the hepaticus; and yet who can say in advance which of these procedures will be indicated?

On the other hand, when proper judgment is exercised as to the type of procedure to be employed and a reasonable amount of technical skill used in its execution, the results in surgery of the gall-bladder and its accessory ducts are certainly gratifying, and that in a class of cases which have always been a bugbear to the general practitioner, who could see no results from his carefully applied therapeutic measures. To the eye specialist, to whom these patients are not infrequently referred, on the supposition that the toxemic headaches are of ocular origin, they are equally annoying, since they either present no refractive error to account for the headaches, or else, if one be found and corrected, complete relief is not obtained.

Neither the limitations of the time at my dis-

posal nor the scope of your patience will admit of a very detailed exposition of this most important subject. My purpose has been to lay stress upon a few points not considered by the text-books, and, if I have succeeded in arousing your interest to the extent of promoting a free discussion, even if you do not agree with me, I shall feel amply repaid for the effort.

DISCUSSION OF THE TWO PRECEDING PAPERS

DR. S. M. HOHF (Yankton): In the first place, I want to commend these writers for their contributions. While their papers have been brief, they have given us valuable points. The subject, "Surgery of the Gall-Bladder and Ducts," is a large one, and empyema in the absence of gall-stones is not so common, and the literature is not so positive on the subject.

Taking up Dr. Cottam's paper, I believe we are taught that about 90 per cent of all gall-stone cases do not produce symptoms, that is, serious symptoms, and that about 10 per cent is about the usual number in which surgical intervention is called for. I think this is a mistake and fallacious teaching. I believe we shall find, as Dr. Cottam has brought out, that a good deal of indigestion, gastric neurasthenia (whatever that may mean), and various other disturbances are often accompanied by gall-stones, and this teaching we have had of gall-stones not producing symptoms is fallacious and has led many in the error of not sufficiently examining and studying their cases. When stones become dislocated, begin to travel, and set up a train of symptoms, the radical treatment by surgery is surely indicated, but it should be undertaken much earlier. Empyema in the absence of gall-stones is not frequent. We find it occasionally following typhoid infection for a greater or less period, following the disease, but in many of these instances it is accompanied by gall-stones. In the cases cited every one, without exception, had gall-stones. The treatment is the same,—open and drain.

The speaker brought up one point as to a possible cause of serious infection, stating that it passed through the portal circulation up through the liver into the gall-bladder. In that event we must consider what might be termed a lithogenous etiology. There is a condition in which deposits of lime salts in different parts of the body take place, and it is in these cases that we may find gall-stones, when the gall-bladder becomes infected by the portal route under these lithemic conditions. We find these concretions in the pelvic cavity and also imbedded in fibroids of the uterus; and in all these cases this lithogenic predisposition may be found. Furthermore there is one fact which I think might be with profit impressed upon the mind of the general practitioner, and that is, that gall-stone disease is a surgical disease, and not medical; also, that surgical treatment ought to be considered earlier. In a mastoid abscess, for instance, we do not wait for a sinus thrombosis to develop, neither do we wait for gastric or duodenal ulcer to develop a peritonitis, nor do we usually wait until the appendix perforates before we operate; therefore why should we wait, even though we do not have pronounced gall-stone symptoms? Why should we not advise surgical relief before more serious conditions develop?

DR. H. T. KENNEY (Pierre): I would like to ask a question in relation to this subject, but before I do so I wish to draw your attention to the great change that has taken place in the field of surgery since eight years ago, when I first started to practice medicine. Then two of our men read papers on the surgical treatment of the gall-bladder diseases. The papers were taken *cum grano salis*, for we did not believe the readers capable of doing that class of work. Today we are doing not only all of our general surgery, but with few exceptional diseases, like goitres, we are doing our special surgery. We have our small hospitals in most every county-seat town and have men there who are capable of, and are, doing their own surgical work. This great change has taken place in the last eight or ten years, and shows the progressive spirit of the doctors of South Dakota.

The question I want to ask Dr. Bobb or Dr. Cottam is, What were the results to the patients after draining the gall-bladder—whether or not there were any bad results from adhesions of the gall-bladder to the peritoneum or any bad after-effects? It has been my experience in the last month to examine two patients who were operated on two years and six months ago, respectively, and who are now complaining of gall-bladder symptoms. I have been wondering what the effects were in your cases.

DR. B. A. BOBB (Mitchell): I think Dr. Smiley could answer that question better than I. Last year the doctor presented a paper on that subject, in which he had gathered statistics showing a number of cases that had had symptoms after operation. My paper dealt more with empyema of the gall-bladder. I may state that most of these patients on whom I have operated for empyema have been very well since. I will admit that there are some cases that do have adhesions afterwards. I have a couple of cases in which I have re-operated for adhesions, and they have been well since. Dr. Templeton saw a case in the hospital in which an abscess came up from a small stone coming out after operation, and an abscess formed in the abdominal wall close to the peritoneal wall. We broke down the adhesions, although we thought at the time it looked like a cancerous condition, and the patient got well immediately after operation. She is living only a short distance from me, and I had an opportunity of following the case. The trouble is this, the great majority of cases have been through all kinds of patent-medicine and other treatment, and the majority of cases are usually in an extreme condition, and they would rather die than remain in the condition they are in. I operate on a true cholecystitis, but I tell the patient he may have pain afterwards. However, these patients expect to be perfectly well after operation—as well as the day they were born.

Some cases have adhesions and have trouble afterwards. I have a case in mind where Dr. Schroeder, of Chicago, operated five years ago and got several hundred stones, and a year ago the patient came to our hospital, and I got thirty-four more.

I believe sometimes during any series of cases following operation everyone will have some bad results, but, as a rule, as near as I can get at it, statistics show that the operation affords a satisfactory result to the patient.

DR. T. B. SMILEY (Mt. Vernon): Dr. Bobb has suggested that I answer Dr. Kenney's question, "Why are so many of our gall-bladder cases not well after operation?" The correct answer is very easy: The operators have not removed all the stones. I want to impress this fact on the mind of every general practitioner in this room. If a patient after an operation for cholecystitis or cholelithiasis, is not free from symptoms, the probabilities are, ten to one, that the surgeon has not removed all the stones. He may invent various myths to cover up his shortcomings, but do not be deceived by anything of the kind. The real explanation is that he did not remove all the stones. I was surprised a few minutes ago by hearing Dr. Cottam state that the presence of stones is not of much importance, is merely a slight incident. It is not the unimportant incident that he would have us believe. An infection of the biliary tract that does not result in the formation of stones is, in only a very small percentage of cases, of much moment; for example, Weil's disease, which has been so common in our state for several years. We all know that the infection that does produce the stone passes almost unnoticed, but probably years after the stones, by irritation and obstruction, become a menace to life. After removal of all stones patients are usually very well indeed, and a second crop is very rare. Adhesions in that part of the abdomen give trouble in only a very small percentage of cases. Let me repeat it, if the patient is not well after this operation, put the blame right where it belongs, on the surgeon, and demand that he do his work over again and do it right. Don't let him persuade you to anything else.

DR. HOFF: Dr. Smiley states that the trouble is almost entirely due to the fact that the surgeon has not done his duty. Let us put it this way. Ninety-nine out of one hundred cases get to the surgeons too late, that is, after complications have so developed that it is a mighty hard and confusing proposition to remove them all. But, on the other hand, if the surgeon gets his cases early, as he should, it is an easy matter to get all the stones, and there being no other complications to contend with, the patient gets well. These cases with a train of sequelæ are coming to us right along, and what makes us indignant is to have them come to us afterward,—after they have gone through a terrific operation,—and tell us they are not well, being advised by their attendant that they should be. It is that class that has gone through the medical mill, through which all sorts of complications have developed, and which makes it practically impossible to remove all the pathological processes that have developed as a result of this delay, plus treatment.

I think Dr. Smiley will find that his deductions are based on this class of cases, which is not fair. Take appendicitis, for instance. An appendectomy made after all sorts of delay with internal medicine, will open up all sorts of adhesions and abscesses occasioned by the delay. Let us get these cases early for operation, and there will be no trouble, because a case of gall-stones is a surgical case better first than last.

DR. SMILEY: In regard to Dr. Hoff's statement that the untoward condition of these patients after operation is due to procrastination on the part of the general practitioner: I would say that the majority of the

good results among my own patients have been with the old, old cases in whom from one to four large stones were found, that is, where the small stones had escaped into the intestine, while only very large ones, which the operator could not miss, remained.

DR. W. D. FARRELL (Aberdeen): I do not believe the failures in these cases are so much the result of leaving gall-stones as they are the failure to leave the drainage long enough. I believe the poor result is often due to improper drainage. The gall-bladder ought, certainly, as in other operations, to be left open until you have evidence of healthy tissue, of sound tissue. The gall-bladder should not be allowed to heal up in less than thirty days, and the mucosa should be inspected to be sure that it is in a healthy condition. I believe it is due to infection because the gall-bladder has not been allowed to drain long enough after operation.

The old cases Dr. Smiley referred to and the reason they get better results in those cases, is, that the gall-bladder has a better chance for healing since the drainage has been maintained longer, and in that event you are surer to get a good result.

DR. H. G. J. KOOPS (Scotland): This discussion raises a query in my mind in regard to the etiology of gall-stones. When we deal with cholecystitis, do we not frequently have another condition, cholangitis, and perhaps a stone-formation above the gall-bladder, and if there is a recurrence after operation might this not be due to the inability to remove the cause, namely, the stones higher up, perhaps still being formed in the bile-passages of the liver?

DR. R. L. MURDY (Aberdeen): I think we should go over the ground thoroughly. I feel that there is no more important proposition confronting the surgeon than early diagnosis. I mean to say that gall-stone conditions should be recognized before the stones have actually formed. We must go back to the formative stages of gall-stones if we want to treat our cases in the most successful manner and with the least amount of sequelæ.

It would be impossible for me to discuss the early symptoms of gall-stones without considering for a moment the etiology of them. Three important factors enter into this early condition. They are, first, lack of drainage, which was first championed by Ochsner, such as we have after appendicitis and other inflammatory conditions in the abdomen that produce adhesions, tight lacing, with angulation of the gall-bladder and ducts, sedentary habits, and constipation; second, infection of a mild character which has gained entrance to the gall-bladder through the ducts or through the portal circulation; and, third, the lithemic diathesis. With these conditions present, inflammation will ensue, and the reaction will produce mucus, and the epithelial cells will secrete cholesterol, the chief constituent of gall-stones. In the lithemic there seem to be present the lithia and lime salts in the blood, in the organs, and the secretions; and also the margarate and stearate of lime, which act as a cement and will cement the epithelial scales, the lithia and lime salts, the mucus and the coloring matter of the bile together, and the gall-bladder will mould them into stones.

We have signs and symptoms which are sufficiently diagnostic at this stage if we could only recognize

them. The symptoms described by some of the early writers, who so graphically described "old-fashioned biliousness" (a condition which we know now to be the formative stage of gall-stones), in many instances could not be improved upon. Prominent among these symptoms are persistent dyspepsia and indigestion, with nausea and vomiting, mid-line pain and tenderness over the gall-bladder. Jaundice is not a symptom of this stage unless complicated by severe inflammation of the ducts. Careful study of cases and early drainage would harmonize the internist and the surgeon.

DR. F. A. SPAFFORD (Flandreau): I think there is one fact we lost sight of, and that is the matter I called to your attention last year at Hot Springs. It is the condition which was called to the attention of physicians by Stiller of Germany, and which he calls *asthenia universalis congenita*, due to a peculiar conformation of the lower costal arch. We find long-waisted people, with ribs running down here (indicating), in whom you will find gastropotosis, enteropotosis, and that sort of thing. In those cases you find symptoms simulating all sorts of diseases. You get symptoms of gall-stone disease, appendicitis, and things of that kind; and if you operate for the removal of gall-stones, or if you remove the appendix, or do what you may, you will not get permanent results; they will come back again and complain of pain, which you had promised to relieve. I think this condition has been recognized by surgeons more during the last year or two, and many of them have refused operation, although all the symptoms were pronounced. This class of cases is foreordained to have trouble. They come by it naturally, and they will not get over it by all the operations you may perform upon them. I have in mind a young woman who came to me four or five years ago. She had all the symptoms of gall-stone disease, symptoms of chronic appendicitis, symptoms of chronic ovaritis, and so on. I would not operate, and she went to another physician who operated and removed the appendix. In six months she was as bad as ever. She went back to the same man, and he removed some gall-stones and, incidentally, made quite an incision in the old gentleman's pocketbook. In a short time after that she was back again and had one of her ovaries removed, which made another incision in the pocketbook. Still she was not relieved, and she came back again to me for some other kind of operation. She was one of those cases described by Stiller, *asthenia universalis congenita*, and which have been described by Cohnheim as *habitus enteropticus*.

DR. F. L. MITCHELL (Orient): There is one point I would like to hear discussed somewhat, and that is the relation of pancreatic troubles and liver troubles. I would like to know whether anyone knows anything about that.

DR. BOBB (Essayist): The doctor asked about cholecystitis and the possibility of a stone in the hepatic duct coming down. I looked up the subject thoroughly relative to the statement made by Dr. Smiley, that we do not do our duty well. I think Dr. Smiley is partly right. Concerning the presence of stones in the hepatic duct: There are some records where the operators found stone in the hepatic duct. Now, in regard to not doing our duty well: I believe we do our

duty as well as the general practitioner tries to do his. We may sometimes leave a stone. We fish as long as we think it justifiable, and after scraping them out we use a salt solution forcing same through the gall-bladder into the intestines, after which we make drainage. We try to do our duty well, and if there are any stones left I do not believe the fault is ours.

Relative to what Dr. Spafford said about these cases of gastropotosis and enteropotosis: I believe that, in gall-stone disease or any other disease, appendicitis, ovaritis, or where you attempt to fasten up a dropped liver or a gastropotic condition of the stomach, or any abdominal ptosis—your result is going to be poor.

The doctor speaks of tight lacing, a long sharp condition of the body being more conducive to this condition. I believe we get as many of the large, corpulent women in this neurasthenic condition as we get of the other class, and you can make as many operations on the old man's pocketbook through the medium of the fat ones as you can through the slim ones. I refused operation only last week in two such cases, knowing it meant only an incision in the old man's pocketbook.

DR. G. G. COTTAM (Essayist): My only criticism of Dr. Smiley's remarks is, that he did not go far enough. He spoke very emphatically regarding the surgeon's duty concerning gall-stone cases. I tried to make the point in my paper that we had a percentage of cases that had no stone in the biliary tract, and yet were relieved by operation, and that this class of cases could not possibly be due to stones when there were none there. The fact of the matter is, that it is infection and its results which, in the vast majority of cases, bring on the subsequent trouble. I had such a striking example of that two or three weeks ago that I think it may be well to mention it here. I saw the case through the kindness of Dr. Culver, a case in which the gall-bladder had been drained a little over a year before by another physician, and no stone was found and no relief was obtained. The woman continued to suffer pain. She was a large, robust woman without that acute costal arch Dr. Spafford spoke of. After all other possible things were thought of it was concluded that it would be well to re-open the abdomen, thinking that possibly some stones might have been left, as Dr. Smiley suggests. I made a wide incision and followed the cystic duct clear down, but no stone was there. The cystic duct was very much atrophied. The gall-bladder was shrunken and useless, and the proper thing to do, it seemed to me, was to remove the gall-bladder, which I did. I was able to satisfy myself that there was no stone present along the whole course of the biliary tract from the liver down to the duodenum.

I know that recurrence has taken place from stones that were overlooked. I am not saying that such cases do not happen, but I think it is the exception. The average man who operates on the gall-bladder and is conscientious in his work, is able to tell whether or not there are any stones left when he gets through.

I fully coincide with Dr. Spafford's idea about a certain type of cases in which we ought to withhold our hands, surgically speaking. I do not see many of them. The patients that come to me with gall-bladder complaints are generally of a different type,—large, muscular individuals. It seems to be my luck to draw this class. I consider myself very fortunate in the average case of gall-bladder trouble I have if I do not

have to deal with a good deal of adipose tissue, but that is the class of cases I usually get. These cases make it difficult to reach the lower end of the common duct for exploration, but it seems to me such people are more prone to gall-bladder disease than the type the doctor mentions, and I do not see many of that type on whom an operation is to be made.

The question brought up by Dr. Mitchell, in relation to pancreatitis or liver disease, is a rather interesting one. From my observation pancreatitis is mostly secondary to gall-bladder and gall-duct infection, and it is a condition very readily explained when we consider the anatomy of the lower end of the common duct. We know that, in a large proportion of individuals, the duct of Wirsung does not have an opening to itself, but it shares the common opening with the common duct, and therefore when a stone becomes impacted in the lower end of the common duct it causes the bile to back up from the lower end of the duct of Wirsung. In case the bile so forced into the pancreas is found to cause any trouble, Flexner has shown that

the flow of mucus in the gall-bladder is greatly diminished, and he has proven that the bile deprived of mucus and injected experimentally into the pancreas will set up acute pancreatitis, but when that mucus is present it does not do so. In other words, healthy bile does not do much in the way of harm to the pancreas, but let the bile become infected and set up an inflammatory condition of the mucosa of the bile-tract and cause a suspension of the secretion of mucus, the infected bile reaching the pancreas sets up an acute pancreatitis. We know, clinically, in that very class of cases that drainage of the gall-bladder does much to overcome the secondary pancreatitis; in fact, it is the only thing so far that seems to be of any use.

I believe that covers all I have to say, except that I have accomplished what I set out to do, that is, to provoke a free discussion, and this has been a most interesting discussion to me. I do not like to read a paper before an intelligent body of men and have nothing said on the other side.

TREATMENT OF PURULENT PLEURISY*

By N. O. RAMSTAD, M. D.

BISMARCK, N. D.

Before considering the modern treatment, it may be of interest to briefly review the history of past efforts. The history of the treatment of this disease goes back to the time of the ancients. Cicero and Pliny tell us how Pheræus, who had been told by his physicians that he had an incurable ulcer on his lungs, sought a quick and honorable death in the front ranks of battle. His chest was pierced by the lance of the enemy. The puncture released the pus and saved his life.

Galen writes of the use of the cautery to open abscesses of the pleura, and records show that the operation was undoubtedly performed at the time of Hippocrates. Among the Greeks and Romans the operation fell into disuse, presumably on account of the high mortality. In the 16th and 17th centuries the operation was repeatedly performed, but was so generally unsuccessful that it was not recommended. The surgeon, Dupuytren, saved 4 out of 50 cases, but died himself from empyema, stating that he would rather die from the hand of God than that of man.

In 1665 the trocar was used in the place of the cautery to open the pleura, and soon thereafter suction was used in connection with it.

In 1850 Bowditch, of Boston, advocated the frequent and systematic use of aspiration for

pleural fluids, and he did much to advance our knowledge of this and related conditions. It was not until Potain, in 1872, devised the modern bottle-aspirator that we had an instrument which could be used for withdrawing fluid without the danger of causing pneumothorax.

To understand the modern treatment of empyema, we must consider its bacterial causes. The pneumococcus, the streptococcus, and the tubercle bacillus are the chief infective agents, with the pneumococcus averaging about 40 per cent of the cases. The so-called mixed infections, with two or more kinds of germs, are relatively common. Other causes are the staphylococcus, the influenza bacillus, the diphtheria bacillus, the colon bacillus, the actinomyces, and a few other varieties in a small percentage of cases.

If the aspirated fluid is apparently sterile, thorough examination usually reveals the presence of tubercle bacilli or pneumococci in a degenerated form.

As the pleura is a lymph-sack, infection may originate within it, or may extend to it from other organs, or be carried to it from a focus of infection in some other point, as the pericardium, the lungs, or the organs in the peritoneal cavity.

The patient suspected of having an empyema should have a careful clinical history taken and

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

a thorough physical examination made. In obscure cases, particularly in small interlobular accumulations and in encapsulated collections between the lungs and the diaphragm, the *x*-ray is of great value in arriving at a correct diagnosis. It is especially valuable in old chronic cases, as it outlines the displaced heart, the position of the diaphragm, and any anatomical abnormality more accurately than do the older methods of examination.

To obtain definite knowledge regarding the character of the pleural fluid, a hollow needle, of not too small diameter, connected with an aspirator or a small glass syringe, is inserted between the ribs over the center of the dull area, and a few cubic centimeters of the fluid are withdrawn for physical, chemical, and bacterial examination.

There are border-line cases between sero-fibrinous exudates and beginning purulent exudates in which it is very difficult to know whether aspiration alone or thorough drainage will be required.

Without going at length into this differential examination it may be safely mentioned that the purulent exudates are characterized by a specific gravity of over 1018, and a preponderance of polymorphonuclear cells. Widal's statement is of considerable clinical significance, when he says that a preponderance of polymorphonuclear cells favors a diagnosis of infectious origin, a preponderance of lymphocytes points to tubercle bacilli and a preponderance of endothelial cells indicates a mechanical cause of the exudate. Cultures and animal inoculation are often needed to exactly determine the kind of infection present.

The careful use of the sterile aspirating needle is generally safe, but it has its dangers. The wounding of an intercostal artery or the large pulmonary vessels, may cause an alarming or fatal hemorrhage, or a pneumothorax may result. I wish particularly to caution against the careless use of the needle in chronic cases, where the pericardium and the diaphragm are apt to be displaced.

The exploring needle is not used often enough in obscure pulmonary lesions where pus may be suspected. The so-called cases of unresolved pneumonia and chronic thickened pleura are very frequently empyema.

As soon as the diagnosis of empyema is made, effort should be made to secure thorough and constant drainage of the pus from the pleural

cavity. We read at times of the successful treatment of these cases by repeated aspiration and the injection of antiseptics, such as alcohol, formaline, phenol, etc. We have given this method a faithful trial in many cases, but with scant success, and have finally almost abandoned it.

As in other severe infections, the long list of complications due to sepsis, such as thrombosis, cerebral abscess, lung gangrene, endocarditis, and pyemia, is practically prevented by early rational treatment.

Drainage is best obtained in recent cases by a resection of a portion of one or more ribs and the insertion of drainage tubes into the pleural cavity.

In our earlier operations of these cases, general anesthesia was used. It always seemed to us as if the anesthetic were more to be feared than the operation. The administration of a general anesthetic to a person who has considerable inflammation of the respiratory tract and lung, exposes the patient to great danger during its administration and often to post-operative complications, such as pneumonia and other pulmonary infections.

In later years practically all of our cases of this nature have been operated upon by means of local anesthesia, and we have saved ourselves much worry and spared the patient much unpleasantness and danger, both during and after the operation. There is less shock, less danger of pulmonary thrombi, less tendency to a rupture of pus into the bronchus during the exciting stage of the anesthetic, and a quicker and safer recovery. The technic we use is briefly as follows:

Unless the patient is a young child, a hypodermic of morphia and atropine is given fifteen minutes before the operation. The location of the exudate and the point of resection are determined. The resection is usually made in the posterior axillary line unless the exudate is encapsulated. After the skin on the affected side is disinfected a few cubic centimeters of local anesthetic are injected about two inches posterior to the proposed incision in such a way as to reach the intercostal nerves underneath the ribs to be resected. Some of the anesthetic is now injected subcutaneously and intramuscularly at the point of the incision. In a few minutes the incision may be made as painlessly as if the patient were asleep under ether. When the periosteum is reached, a few drops of the solution are injected beneath it. It is then incised length-

wise and separated from the bone all the way around the rib. A bone forceps severs the bone proximally and distally. If more room is needed, a second rib is removed in the same manner. The pleura is now incised and a Kelly hemostat introduced until the pus flows in a small stream. The pus is allowed to escape gradually so that the intrathoracic pressure may be slowly changed. The opening may be enlarged so that the clumps of fibrin can be removed and delicate adhesions severed. Care is taken to injure the periosteum as little as possible, for it is from this that the ribs regenerate. Short rubber tubes are now inserted and fastened with a suture or with a safety-pin. The so-called flanged tubes we have not used much. The outer ends of the tubes are at once covered with a six or eight inch piece of rubber dam, which, acting as a valve, favors drainage, helps to maintain a partial vacuum, and prevents the entrance of air into the pleura. A large absorbent dressing is applied outside of this. The patient is put to bed on a back rest, and the open-air method of treatment is used as much as possible. Convalescence is usually rapid and uncomplicated. After a few days some of the simple methods favoring the early expansion of the lung are used, such as blowing water from one wolf-bottle to another.

In the treatment of empyema of long standing we have to deal with an entirely different condition. The lung is usually compressed into a mass, which is only a fraction of its normal size. Its expansion is limited by the adhesions between it and the parietal pleura.

In these cases, local anesthesia will not suffice, and light general anesthesia is necessary. As a larger opening is required, this is best obtained by making the incision at right angles to the ribs and resecting two or three ribs so that the fingers, or even the hand, may enter the pleural cavity, locate the collapsed lung, and strip it

free from its adhesions. This allows it to expand and assists in obliterating the space formerly occupied by the pus.

In a small proportion of the chronic cases it is necessary to resect large portions of the chest-wall, in order to cause it to collapse and obliterate the vacant space.

The treatment of tubercular empyema is entirely different. So long as the infection is not a mixed one, these cases are better treated without the establishment of drainage. We have had the best success with general treatment combined with aspiration of the pus and the injection of small doses of antiseptics, such as carbolic acid, formalin, or iodoform. Every care must be taken to avoid infecting these tubercular cases, and also to avoid forming a fistula, as this is liable to become permanent.

The treatment of secondary empyema must, of necessity, be carried on in conjunction with that of the primary condition.

DISCUSSION

DR. A. C. MORRIS (Fargo): I appreciate having this subject called to our attention again and so thoroughly. As the doctor stated, it is a common condition, and we have all met many of these cases. My treatment has been along similar lines. I have nothing new to say regarding the matter. I shall be glad to hear of some of the newer methods of treatment from men who have had experience along these lines.

DR. H. H. HEALY (Grand Forks): I would like to ask Dr. Ramstad what he uses as a local anesthetic.

DR. N. O. RAMSTAD (Essayist): I do not believe it makes so much difference what you use as how you use it. I use a local anesthetic of any kind, but one should undertake a careful study of the anatomy, particularly of the nerve-supply to the parts. I have used eucaïn and novocain, and have tried five or six different things, and I do not think it makes a whole lot of difference what we use.

In all the work I have seen, the use of local anesthesia has just begun. From now on our work is going to be done more and more in that way, and I brought the matter out in this paper simply to show what it will do in these particular cases, which we get so many times in a year.

"NASALCATARRH," NEURALGIAS, HEADACHES, AND OTHER SYMPTOMS ARISING FROM UNSUSPECTED ETHMOIDITIS*

BY FRANK C. TODD, M. D.

MINNEAPOLIS

Let us recognize the fact that the old classification of diseases of the nose and throat is no longer of any value. In the minds of the laity, all diseases of the nose and throat are called "catarrh." Patients nearly always describe any nose or throat trouble by the one word "catarrh," and they seem satisfied with that diagnosis. The word *catarrh* is thus wrongfully used to mean any mal-condition of the nose or throat. Used in this way, it has no value whatever. In earlier days, similarly the diagnosis "fever" was made when a patient had a disease characterized by a rise in temperature, regardless of whether he was suffering from typhoid fever, pneumonia, or any other disease producing the fever.

The term *catarrh* really means a discharge from the mucous membranes, and is only a symptom of some disease. It may arise from an acute infection, from anything which may interfere with drainage, such as deflected septum, or from hypertrophied turbinates; or it may come from disease of any of the accessory sinuses.

Of these accessory sinuses, the ethmoidal are by far the most commonly attacked with disease. I am aware that many authorities state that the antrum is most frequently affected with suppuration, and that this is the prevalent opinion. This idea is due to the fact that antrum disease has been more readily recognized, and, indeed, often diagnosed when the antrum suppuration is only secondary to the ethmoidal or frontal sinusitis.

It not infrequently happens that the antrum acts as a reservoir for the pus which originates in the ethmoidal or frontal cells, and hence efforts to cure an antrum abscess, without first curing the ethmoidal or frontal sinus abscess, prove futile, while, conversely, *the curing of the latter will usually result in cure of the antrum disease without any attention being directed to the antrum itself.*

I desire to emphasize the fact that ethmoiditis is a very frequent disease in the chronic form; and in varying degrees of severity it is still more frequent in the acute form. Acute ethmoiditis

is, in fact, probably present in every severe attack of cold in the head.

Resolution usually takes place in these acute cases as the cold subsides; and the patient or his physician does not realize that he has had an attack of acute ethmoiditis. In certain cases, however, some or all of the cells may become chronically diseased, or, as a result of repeated attacks, may become so chronically affected that the disease is thereby established.

To determine the prevalence of chronic ethmoiditis I looked up our records for the five months (January-May) of 1911. I find that we have made the diagnosis of ethmoiditis in 34 patients, 22 of whom had both sides affected, making a total of 56 ethmoidals affected. In view of the fact that in a number of these, diagnosis was made only during the process of an operation, which had to be performed anyway, it is probable that some cases were missed.

Twenty-nine exenterations have been performed during the past five months.

Symptoms of chronic ethmoiditis are many, but sometimes there are so few, and they are so obscure, as to make the diagnosis difficult.

SUBJECTIVE SYMPTOMS

Discharge.—In old and severe cases of chronic ethmoiditis, discharge may be very profuse and purulent in character. In these cases polypi are likely to be present in the nose. Often, however, the discharge may be very slight and difficult to demonstrate, occurring only at certain times. In such cases it is necessary to use the Brawley hydraulic, or other strong suction-pump, in an endeavor to bring the discharge down into the nasal cavity.

When present in the ethmoidal cells the discharge will appear as coming from around the middle-turbinate body into the middle meatus. Discharge in this region, however, may arise from the frontal sinus and may come even from the antrum. This should be differentiated by having the patient lie on the side opposite the affected antrum, when pus may appear in the middle meatus, coming from the antrum. Other methods of assistance in a differential diagnosis are transillumination and irrigation of the sinus suspected.

*Read before the Minnesota Academy of Medicine, June, 1911.

Pus coming from the antrum does not eliminate ethmoiditis nor does it necessarily mean that the antrum is diseased, for the pus contained therein may have originated from the sinuses above. Discharge coming from the posterior ethmoidal cells and from the sphenoidal cells appears in the nasopharynx, and the patient complains that he has dropping into the throat. Sometimes this discharge dries and forms a crust in the nasopharynx. The character of ethmoidal secretion varies greatly, sometimes being mucoid, sometimes mucopurulent, and sometimes aqueous. It may dry and form a crust.

tacks in the morning or at any time, especially after exposure to dust or to wind; and he apparently "catches cold" easily. Often he states that exposure to the least wind or draft brings on a cold. The attack may as rapidly subside.

Sometimes the patient complains that he has hay fever the year round (see Cases 3 and 4), meaning that he has symptoms similar to hay fever at any time. In this connection, I might say that Ballenger, in his book, calls attention to the frequency of ethmoiditis in conjunction with hay fever, and makes the suggestion that ethmoiditis may be the cause of hay fever. This

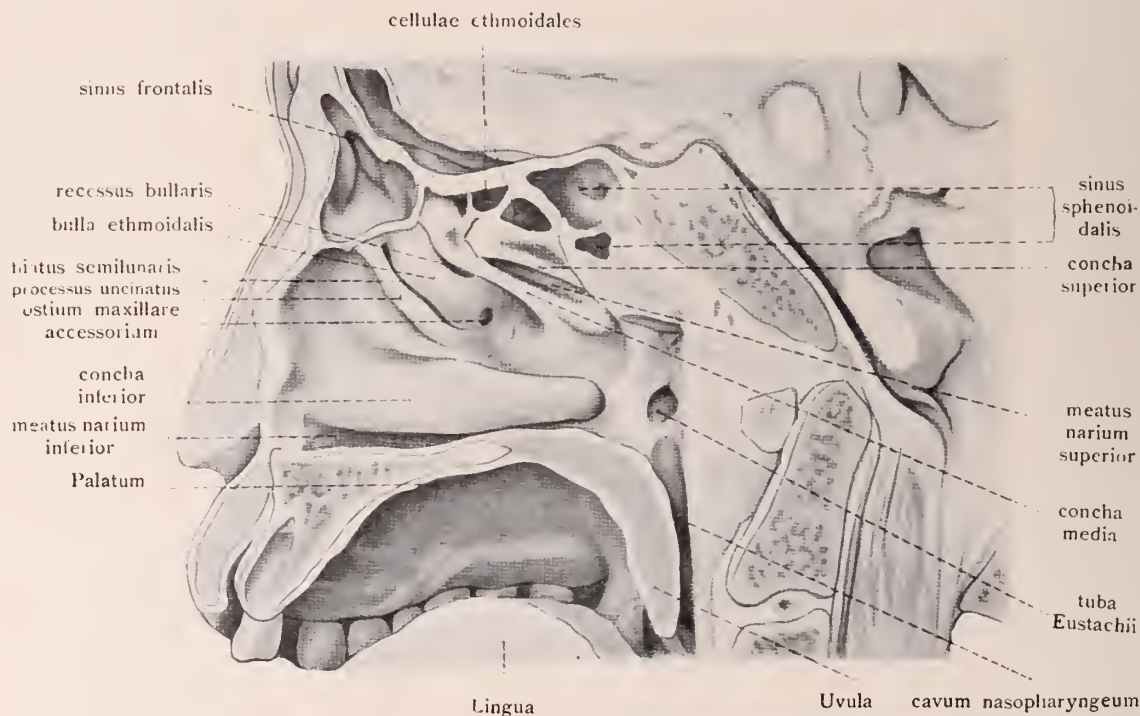


Fig. 1. Lateral view, septum removed.

The secretion is sometimes acrid and produces excoriations around the alae, and fissures may thus form. This acrid secretion will affect the inferior turbinate body, so that it will become shrunk in size, and thus we shall have presented the picture of a large middle turbinate, perhaps entirely filling the space, around which there may be polypi, while the inferior turbinate will have lost its normal appearance, not alone as to size, but as to color, and it may be covered with a whitish exudate, as in Case 5. The discharge sometimes resembles that which accompanies hay fever, and the patient is easily subject to attacks simulating hay fever.

Sneezing.—The patient may have sneezing at-

cannot be the case, in view of the fact that hay fever is commonly present when ethmoiditis does not exist, and such a theory cannot explain the irritating effect of pollen on the eyes or upon any mucous membrane of a hay-fever subject. But it is true that these diseases are frequently found associated, and this is easily explained. It will be found in such cases that Ballenger has placed the "cart before the horse," the ethmoiditis having resulted as a consequence of repeated attacks of hay fever (see Cases 3 and 4), giving rise to acute ethmoiditis and finally chronic ethmoiditis in the same way that repeated colds bring on the disease. In case ethmoiditis develops as a result of hay fever, the patient may

have hay-fever symptoms the year round; and during the season his hay fever is much worse.

Pain, Headache and Neuralgia.—Pain in conjunction with chronic ethmoiditis is not an invariable symptom, but is often present. It may present itself in the region of the middle turbinate between the eyes. Neuralgia, especially supra-orbital and retro-orbital (from inflammation of the ophthalmic division of the fifth nerve), and headache, however, are very commonly attributable to ethmoiditis, and this is true even where the ethmoiditis is so slight that it may not be discovered through the ordinary

the tenderness which arises from ethmoiditis and that from frontal sinusitis; the latter, however, is higher up.

Headache that arises from ethmoiditis is said to increase when the patient stoops forward. This, of course, is also true in the case of frontal sinusitis.

A very common location for ethmoidal pain is in the back of the eyes, and it is often difficult to differentiate it from pain due to an error of refraction. I would say, however, that in any case where pain that is attributed to the eyes, is unrelieved by the correction of the cause of the

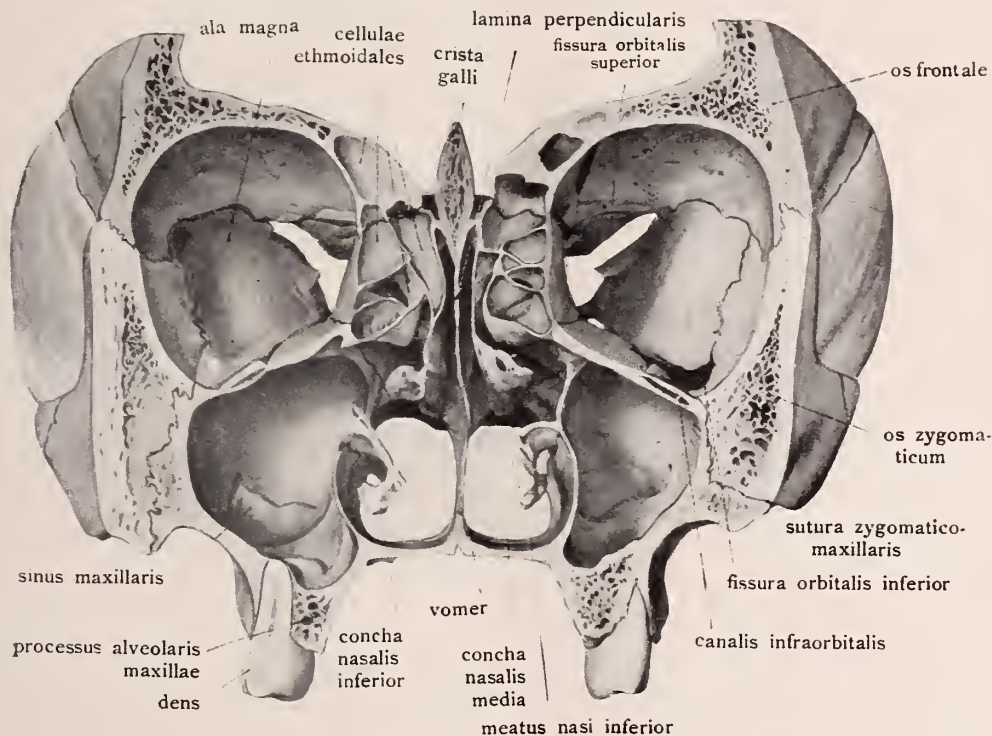


Fig. 2. Section showing the posterior portion of the sinuses.

means of diagnosis. I have seen cases where there was no other evidence of ethmoiditis demonstrable before operation than that of supra-orbital or other forms of neuralgia. Some such cases cause so much suffering that it is thought the part of wisdom to investigate the ethmoidal cells, regardless of the absence of other symptoms, when it may be found wise to open them and give the patient relief. (Case 1.) It is probable in such cases that the ethmoiditis is slight.

The pain may consist only of a "tight" feeling in the region of the middle-turbinate body. There is sometimes, but rarely, tenderness on pressure, and it may be difficult to distinguish

eye-strain, the ethmoidal cells are more apt to be the cause than anything else.

We used to hear much of "sensitive areas" in the nose, particularly in conjunction with hay fever. Under normal conditions the healthy mucous membrane of the nose is rather sensitive to touch. When it becomes inflamed it becomes much more sensitive, and those "sensitive areas" of which we heard are really instances in which there is present inflammation. Such is the case when ethmoiditis is present.

Deafness.—It not infrequently happens that the Eustachean tube and middle-ear become secondarily involved, and deafness thereby results.

Anosmia, or loss of sense of smell and taste, is a very frequent symptom of ethmoiditis in the severe form, and is due to the closure of the olfactory slit by the swelling of the middle turbinate or because of the formation of polypi, or it may be due to disease of the nerve-endings in the region contiguous to the ethmoidal cells. Upon relief of the disease the sense of smell and taste is usually recovered.

Cacosmia.—Perception of bad odor due to the suppuration may be present.

Sight.—Sight may become affected because of the involvement of the optic nerve, the choroid, or other ocular parts, which will be spoken of under objective symptoms.

Fever.—Rise of temperature may accompany chronic ethmoiditis, in which case it is intermittent and usually low. It often simulates the fever that accompanies phthisis pulmonalis. More often, however, the temperature is normal.

OBJECTIVE SYMPTOMS.

Polypi.—Polypi that arise from a middle-turbinate body or near the turbinate body, or those that appear in the olfactory fissure, nearly always arise as a consequence of disease of the ethmoidal cells. (Cases 3, 4, 5, and 6.) Of course, they may be present in connection with frontal-sinus abscess, or in conjunction with abscess of the antrum or an abscess of the sphenoidal cells, but it is a rare thing to have sphenoidal involvement or frontal sinusitis without having ethmoiditis (Cases 6 and 7); and ethmoiditis is far the commonest of any of these diseases, so that it may be considered that in nearly all cases of polypi arising in the localities mentioned, ethmoiditis is present.

The old method of removing polypi with the snare and being satisfied with that procedure, is only palliative and trifling. When polyps are present, arising from this locality, the only rational procedure is to remove the entire foundation of these polyps and their cause, which means the removal of the middle turbinate, which contains some ethmoid cells itself, and a thorough exenteration of the ethmoidal cells. All through the small ethmoidal cells may be found granulation-tissue, which, if not removed, may become polypi. In view of the pathology it is not surprising that polyps continue to recur when they are removed, and the diseased tissue from which they spring is allowed to remain.

Swollen Middle Turbinate.—When inflammation is present in this region the middle turbinates are nearly always swollen. This is a valu-

able symptom of ethmoiditis. Hypertrophied middle turbinates themselves are apt to give rise to ethmoiditis, even if it is not present before they have become enlarged. As an aid to diagnosis they should be shrunk, if possible, and an effort made to suck the secretion from the ethmoidal cells. Ethmoiditis, however, may be present when the middle turbinates are not enlarged.

Bare bone.—The bone may be palpated through the olfactory fissure with a probe and may be found bare.

Ocular symptoms.—The loss of sight, mentioned above, may be due to a secondary involvement of tissues or vessels of the orbit originating in the ethmoidal cells and giving rise to optic neuritis, choroiditis, keratitis, uveitis, or other inflammatory conditions. Exophthalmus may result from orbital swelling.

Nerve paralysis.—The optic nerve is situated over the roof of the sphenoid and may become involved, likewise also the third, fourth, and sixth nerves, giving rise to strabismus.

Meningitis.—Meningitis or brain abscess, or sinus thrombosis may complicate infection of the ethmoidal cells, giving rise to symptoms that arise from these diseases.

Septicemia.—Septicemia may, of course, become a complication.

Treatment.—Obviously, the treatment of chronic ethmoiditis is removal of the middle-turbinate body and a free opening of the ethmoidal cells, the complete removal of diseased bone and soft tissue, and the maintenance of open drainage. The practice of removing polyps caused by ethmoiditis and leaving untouched the diseased cells from which they arise, cannot be too strongly condemned.

To secure proper drainage it may be necessary to straighten a deflected septum by submucous resection.

As healing takes place granulation-tissue may form in excess, when it should be removed and the surface cauterized. This treatment is continued until a firm covering has formed. Some typical cases are herewith appended.

The following cases are taken at random and are selected for the purpose of illustrating various points in the paper.

CASE 1.—*Severe periodic supra-orbital neuralgia on left side; attacks coming on at about the same time nearly every day. No discharge; no polyps. Had been mistaken for frontal sinusitis. Operation on ethmoidal cells with immediate and complete relief.*

S. D., aged 20, male, student in a distant city, was taken March 29th with severe pain over the left eye, which lasted several hours. He consulted his oculist, who tested his eyes, but could find little change to make in the glasses. The next day, pain resuming, he consulted a nose specialist, who diagnosed acute frontal sinusitis. He shrunk the tissues and tried to wash out the sinus. He stated that there was a little secretion, but the patient did not see it. He treated the patient by spraying each morning, shrinking the tissues (evidently with adrenalin). No discharge followed, but neuralgia recurred daily, and the patient

absence of fever, excepting 1° during the seizure, the subsidence of the pain without being preceded by pus discharge, the periodicity and localized pain, caused me to make a diagnosis of supra-orbital neuralgia, and not frontal sinusitis, probably caused by ethmoiditis and pressure on the left side in the middle-turbinate region. This was further confirmed by the fact that the use of a spray of cocaine when the attack had started, averted the attack, and the next day the use of cocaine very much reduced the severity.

Operation.—Under cocaine anesthesia at the hospital the left middle turbinate was removed and the ethmoidal

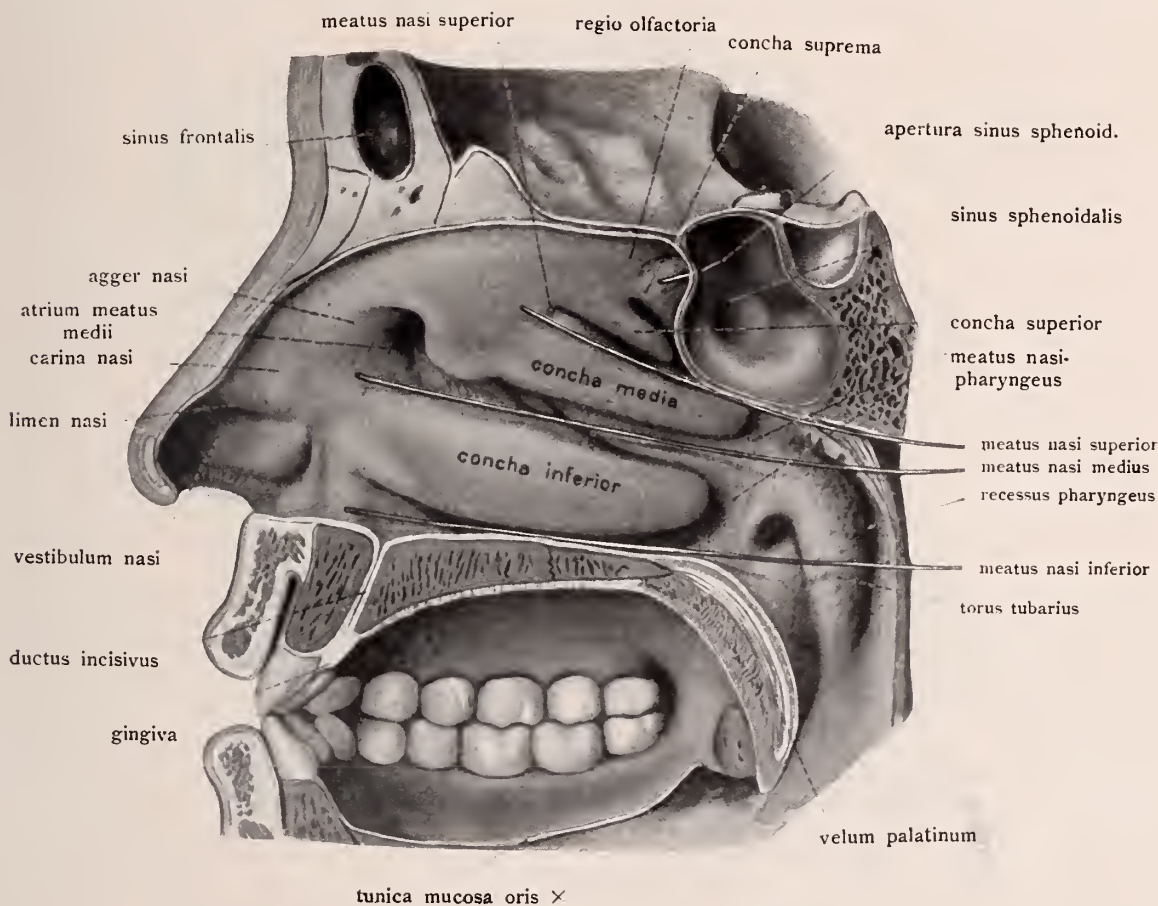


Fig. 3. Lateral view of Fig. 2, with the septum removed.

came home and put himself under another rhinologist, who made the same diagnosis of frontal sinusitis and continued the treatment, with the same results. The patient consulted me April 13th, giving the above history and stated that the only day he had not had an attack since the beginning of the disease was the day on the train when he had not received treatment.

Examination.—The septum is deflected to the left and is tight in the region of the middle turbinate on the left side. No polypi, and no discharge can be brought down with the suction-pump. Tender over region of left frontal sinus, but most tender in supra-orbital notch along the course of the nerve.

Diagnosis.—The absence of secretion at all times, the

cells exposed, and to improve drainage the septum was straightened by submucous resection.

Result.—There was no recurrence of the neuralgia after the operation.

CASE 2.—*Severe headaches for seven years, growing in frequency. Thought to be due to nephritis. Unrelieved until the ethmoids were curetted.*

Mrs. M., age 41, has had nocturnal headaches for seven years, lasting several weeks at a time without relief, located over the frontal region in the temple and dull feeling all through the head. These headaches are increasing in frequency and severity, the patient has lost flesh and is anemic. Has had albumin and casts. Dr. Cross reports albumin now

absent and very few casts, though headache persists.

Nose Symptoms.—Always has a collection of mucus in nose and throat mornings. Left side stops up easily. Three years ago the right middle turbinate was removed.

Examination.—The right inferior turbinate is nearly all gone, and the remnant adheres to the septum. Large and soggy middle turbinate adheres to the septum. Right middle turbinate is also large and soggy. No polyps are visible. There is a discharge from the region of the middle turbinates. The middle turbinates

late years, she has it the year round. Nose is stopped, discharge all the time, and sneezing when exposed to a draft or to any form of powder-like dust. Takes cold easily, head seems stuffy, becomes deaf and has frequent attacks of bronchitis. There is loss of sense of smell. Eight years ago she had polypi removed from the nose.

Examination.—Shows polypi in the nose on both sides, septum deflected to right; enlarged middle turbinate on both sides.

Operation.—April 17th the right middle turbinate was

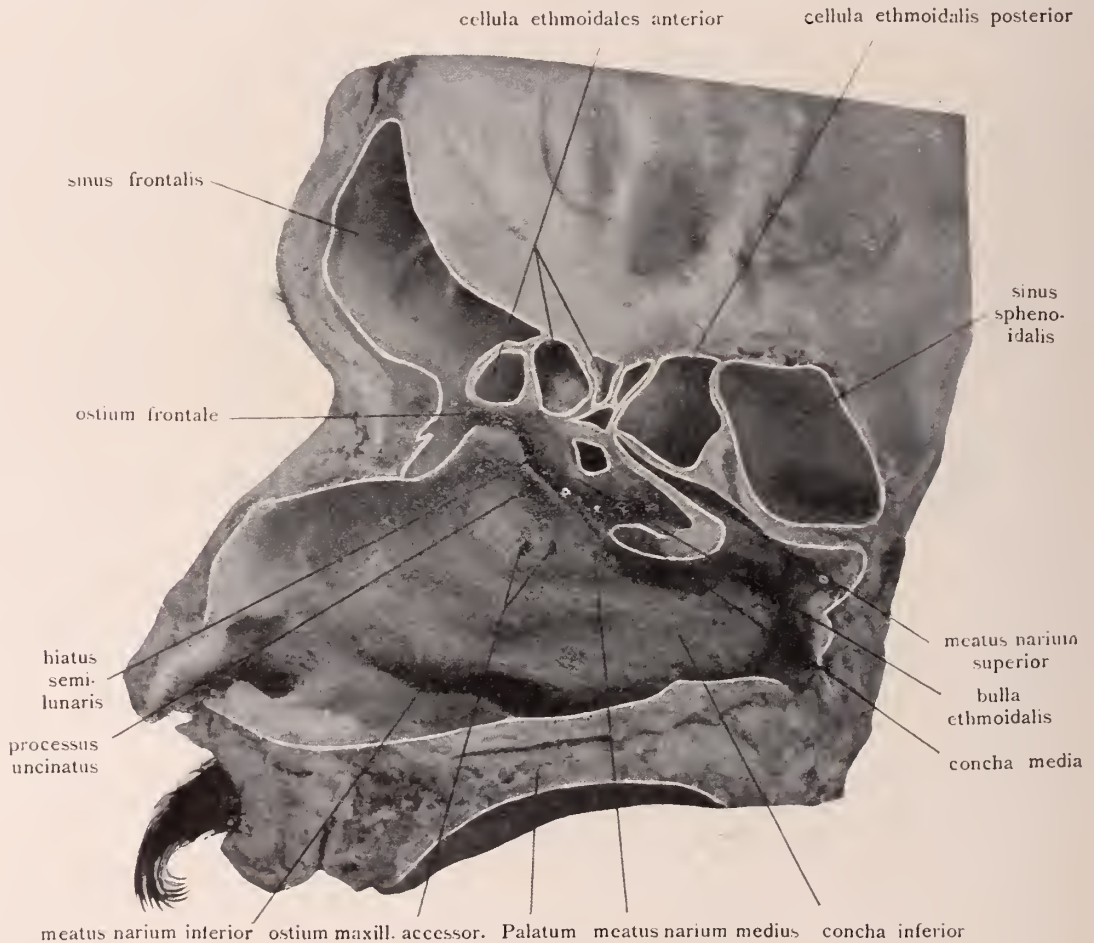


Fig. 4. Lateral view, middle turbinate cut away, showing the ethmoidal and sphenoidal cells.

are polypoid, and the ethmoidal cells are full of granulation.

Operation.—Left side operated upon on November 8th and the right on November 26th. Both middle turbinates were removed and the ethmoid cells exenterated. The middle turbinates were found to have undergone polypoid degeneration, and the ethmoidal cells were full of granulation-tissue.

Relief of pain was immediate and permanent. Improvement in health followed.

CASE 3.—Illustrative of ethmoiditis resulting from hay fever.

Mrs. E. S., aged 29. For many years she has had hay fever, or pollenosis, every fall, but says that

removed with exenteration of the ethmoidal and sphenoidal cells. May 17th left middle turbinectomy and exenteration of ethmoidal and sphenoidal cells.

Result.—Patient's symptoms are relieved and she considers herself recovered, though she will require the usual after-treatment before recovery can be considered complete.

CASE 4.—Illustrating chronic suppurative ethmoiditis resulting from pollenosis, or hay fever.

W. G. J., aged 49. Patient consulted me April 20th, 1911. Gave history of having had hay fever for over twelve years during the fall season, and stated that for over ten years he has had polyps removed from his nose repeatedly, and only three or four weeks

have elapsed since he had the last polyps removed. Has the usual symptoms of a marked case of ethmoiditis, i. e., discharge, stoppage of the nose, catches cold easily, loss of sense of smell.

Examination.—Shows both nostrils containing polypi, originating in the region of the middle turbinate and also extending into the back portion of the nares.

Diagnosis.—A diagnosis of ethmoidal sinusitis and sphenoidal sinusitis was made.

Operation.—On April 22d the left middle turbinate and ethmoidal cells with the sphenoidal cell were exenterated. Recovery was rapid, and there has been no recurrence. As is often the case, the ethmoidal

cated in the region of the frontal sinus. For the past eight months he has been having some difficulty with the ears stopping up, so that hearing was not normal. He states that when he blows his nose his ears stop up. The Eustachean tubes are found patulous, and air enters them very readily. It is evident that when he blows his nose some of the secretion readily enters the Eustachean tubes, giving rise to the symptoms described. At this examination there is no frontal sinus pain. As in all these cases, transillumination was made. It is of little or no value in ethmoidal sinusitis, however, though of some value in eliminating antrum and frontal sinus complications.

Examination.—Examination shows small polypi in

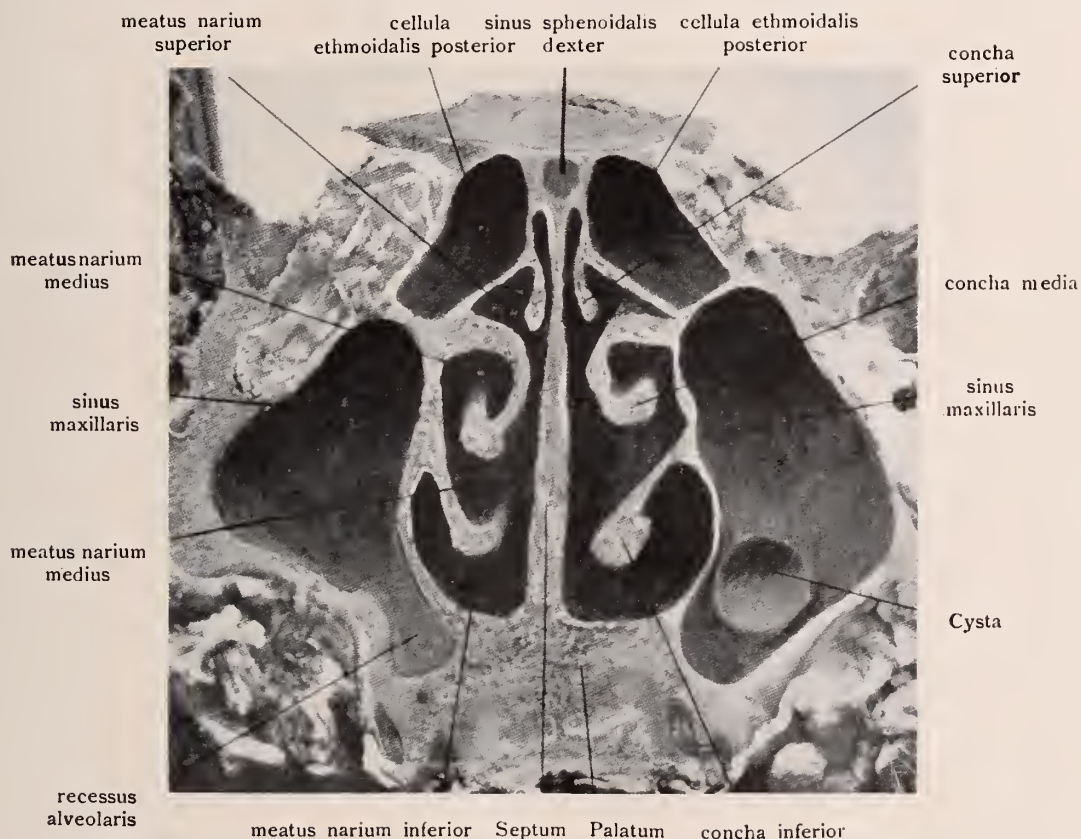


Fig. 5. Sagittal suture showing the relations of the posterior ethmoid cells to the nasal cavity.

cells were found to be full of small granulated tissues and incipient polypi. The patient is quite relieved and has more comfort than he has experienced before. He is soon going to have the other side operated upon. This case especially illustrates the folly of removing polypi without opening the ethmoidal cells freely, when such polypi are caused by ethmoiditis.

CASE 5.—*Illustrating the effect of ethmoidal sinusitis upon the hearing.*

E. A., aged 43. Patient states that he has always had a little catarrh, and that he has had difficulty breathing through his nose, though he is able to do so. Has had two attacks of severe pain followed by discharge of pus from the nose. This pain was lo-

both nostrils, very large middle turbinates and shrunken inferior turbinates, with a whitish, thin acrid secretion flowing over them.

Operation.—On May 5th the left middle turbinate was removed, the ethmoidal cells exenterated, and the sphenoidal cells freely curetted. On May 26th the same operation was performed on the other side. Already the patient has experienced much relief in his symptoms of discharge, and hearing has improved. The patient states that he is able to smell for the first time in years.

CASE 6.—*Illustrating especially the mistake that is often made of the diagnosis of antrum sinus suppuration when the trouble originated in the sinuses higher up, the antrum acting only as a reservoir.*

Miss G. H., aged 40, trained nurse. Patient states that one year ago she had a little abscess in the right nostril, which was cauterized and disappeared. In the middle of March, that is, about two months later, she had a violent chill, followed by swelling of the whole right side of the face and around the right eye. This lasted five days. Following this she had an opening made above the right second bicuspid, a crowned tooth. The antrum discharged through this opening for seven weeks; then the tooth was removed. It did not, however, relieve the severe pain. Discharge followed in the right nostril and soon in both nostrils. During this attack she had no pain in the frontal sinus. Last December she had an opening made and a tube inserted into the antrum through the alveolus. Drainage took place through this tube. Since that time has noticed considerable pain in the region of the frontal sinus, especially on the right side, but later on the left side. This pain has been very severe in the past two weeks. Has had attacks of bronchitis.

Examination.—Examination shows both frontal sinuses very tender. Transillumination is negative. There are some polyps in the region of the middle turbinate.

Operation.—On January 12th I performed a radical Kilian operation. Found both frontal sinuses filled with pus and granulation-tissue. Removed both middle turbinates and exenterated the ethmoidal and sphenoidal cells, which were filled with granulation-tissue. Nothing was done to either antrum. At a later date it was necessary to do a submucous resection of the septum because the septum was deflected to one side, thus good drainage was secured from both frontal sinuses. The patient was under treatment for about three months, and since that time she has been under our observation every two or three weeks. About six weeks after the operation on the frontal sinus, the old tube was removed from the antrum and the small opening allowed to close. There has been no discharge from the antrum after two weeks after the frontal sinus operation. Thus the antrum healed without operative interference. The patient has recovered her health, pain has entirely disappeared, and discharge has ceased. The frontal sinuses are filling up, and one side seems to be completely filled now. It is evident that the antrum, which has been treated so persistently by several physicians and dentists, was only acting as a reservoir for the pus, which originated higher up, in the frontal sinus and in the ethmoidal cells.

CASE 7.—Ethmoiditis complicated by frontal and sphenoidal sinusitis of many years duration. Symptoms of discharge on one side. Pressure feeling in the region of the middle turbinate and pain through the head. Relieved by radical Kilian operation on frontal ethmoidal and sphenoidal sinuses.

H. W. S., aged 60, farmer, was referred to me October 14th, 1908. He complained that he had had a "catarrhal" discharge for many years, especially from the right side. For the past ten months he called his discharge "pus," as it differed in character. Had a "pressure feeling" in the region of the middle-turbinate bodies and pain through his head. This pain was almost continuous, but has been relieved at times. There was loss of sense of smell. His teeth were all removed last June in hope of relieving the pain, without avail, however. The patient is much run down in health, having lost flesh and appetite, and suffers from chills and fever at times.

Examination.—Examination disclosed a profuse pus discharge on the right side with some tenderness over the frontal sinus. The region of middle turbinate was filled with polypi on the right side. A smear showed staphylococci, micrococci tetragenous and bacillus pyocyaneus.

Diagnosis.—A diagnosis of ethmoidal sinusitis and frontal sinusitis on the right side was made. On October 15th, 1908, a radical Kilian operation on the frontal sinus was performed with complete exenteration of the ethmoidal and sphenoidal cells. The frontal sinus was found filled with pus and a pyogenic membrane. Free drainage was secured into the nose, and wound sutured. The patient went home about three weeks after the operation, where the irrigation of the sinus was continued by his family physician, a cure resulting.

He returned May 28th, 1909, with similar symptoms on the other side. The same operation was performed upon the left side. It is probable that this left side was diseased at the time of the operation of the right side. In the operation upon the left side an opening was made through the septum, dividing the two frontal sinuses, and it was found that the formerly operated right frontal sinus was entirely filled with a fibrous tissue, thus showing how repair takes place in such operated cases. As following the previous operation the patient returned home after about three weeks, and recovery became complete.

Tribune has supported the pure food laws and has upheld the attempt for high grade medical service.

Many diseases which now exist are due to ignorance and carelessness and it is right to assume that the average person would like to know how to avoid being sick. If the public understood simple sanitary laws, ventilation, and the "good-air" movement, most of the preventable diseases could be wiped off the map. Not only must the common people know what is good for them, but they must be able to assert and gain their rights with their employers. The best and greatest corporations appreciate the necessity of keeping their shops and factories sanitary, and they also realize that anything that adds comfort and better hygienic surroundings to their employes means more efficiency in every line of work. To increase the amount of work done by a laborer carries with it the need for good air, good food, and a definite and convenient rest period.

If, in the course of time, preventive medicine becomes popular, there will be fewer drugs and fewer doctors, but this the profession will accept. It may be a loss to the manufacturers of patent medicines, but the gain to the public will outweigh any financial loss.

It will take decades to educate the masses, but already the people have shown a willingness to learn, and already many diseases have been diminished in force and frequency. If every large city in every state would follow the lead of the Chicago Tribune, the smaller papers would abstract and print health news, and, eventually, would call for "copy." Give the newspapers what they want in a suitable, readable form and there would be no trouble about its insertion in the columns of every paper. The religious papers will be slow to accept good-health stuff as they have been habituated in the printing of semi-religious testimonials that conceal the offer of foolish and absurd cure-alls.

THE JOURNAL-LANCET has under consideration a plan for the distribution of reading matter for the country newspapers in Minnesota and the Dakotas. An outline will soon be prepared and submitted for advice and suggestions from the medical profession.

UNIVERSITY ITEMS

A new clinic for cancers and other tumors has been established in connection with the department of surgery in the University of Minnesota.

Professor J. Clark Stewart will be in charge, and cases sent to the dispensary or hospital will receive prompt attention.

Clinic at the dispensary Wednesdays, 1.00 to 2:00 P. M. Clinic at the Hospital Thursdays 8:30 A. M. All classes of cases will be received, but those seen too late for benefit by operation or other treatment will only be kept in the hospital until complete diagnosis can be established.

Friends of the University are requested to refer this class of cases to the clinic.

CORRESPONDENCE

Adrian, Minn., Sept. 18, 1911.

EDITOR NORTHWESTERN LANCET,
Minneapolis.

Sir:—I have received the program of the October meeting of the State Medical Association and it interests me very much. I note that there are 31 papers on the program, to be disposed of in two days. To me this looks like a rather large contract. It means two days of very hard work, or rather, that the papers will be skimmed over and discussed in a desultory and superficial manner.

Of the 31 papers on the program four will be read by physicians from other states; eight will be presented by Minneapolis, and eight by St. Paul, men; the Rochester group will have five papers, and Duluth will be represented by a single one; the other five papers have been generously assigned to the great mass of the profession outside the cities.

Of the 49 men selected to open the discussion of the papers, 24 hail from Minneapolis, 17 from St. Paul, 2 each from Duluth and Rochester, and 4 from all the rest of the state.

Query: Are the rank and file of the physicians of the state such a poor lot that they have nothing to offer that would interest the high brows of the cities, or be of value to the profession as a whole? What is the answer?

Respectfully,

M. SULLIVAN,
Minneapolis, Minn.,

September 21, 1911.

EDITOR OF THE NORTHWESTERN LANCET AND
JOURNAL OF THE MINNESOTA MEDICAL ASSO-
CIATION.

Dear Sir:—In reply to the above letter by Dr. Sullivan of Adrian, Minn., the undersigned Program Committee wishes to state the following. The Program Committee realized that the objection above noted has become almost an annual one, that is, that the cities are too well represented on the program and the remainder of the state not enough. The Program Committee attempted to avoid this in the following manner: The first step in framing this program was to write 32 letters to representative men of this state asking for papers for the annual meeting. The division was as follows: Minneapolis, 5; St. Paul, 4; Duluth, 5; Rochester, 1 (asking for a symposium); and 17 to the remainder of the state. Had everyone answered affirmatively the program would have been complete excepting the orations and the President's address. These 17 letters to the country were sent to representative men and it was the sincere desire of the Program Committee that they would bring papers. Of the 17, 5 responded affirmatively and are on the program, 4 declined, and 8 sent no answer whatever. In the meantime the Committee had received a certain number of requests to admit papers which deserved consideration. The Committee in addition was anxious to frame a few symposia that would be of practical value to everyone attending the meeting.

Regarding the number of papers it may be said that there are always a few men who fail to present their papers. Should all papers be presented it would simply necessitate some promptness and despatch on the part of the presiding chairman and essayists. Regarding the 49 men selected to open the discussion the Program Committee wishes to state that these names were nearly all selected by the essayists at our request. In only a few exceptional cases did the Program Committee select the men who are to open discussions. These few selections made by the Program Committee to discuss papers were men nearly all outside of the Twin Cities.

Yours very truly,

H. L. ULRICH,
E. S. GEIST,
T. McDAVITT,
Program Committee.

MEETINGS

ALUMNI LUNCHEON

The alumni of the University of Minnesota will have luncheon at Hotel St. Paul on Friday, October 6th, at 1 o'clock.

RUSH MEDICAL REUNION.

The Minnesota Rush Alumni will hold a reunion and luncheon at Hotel St. Paul on Friday, October 6th, 6:30 P. M.

E. H. BAGLEY, Secretary.

MINNESOTA STATE SANITARY CONFERENCE MEETING

OCTOBER 4, 1911, 10 A. M.
HOTEL SAINT PAUL
ST. PAUL, MINN.

The Conference is designed to bring together for discussion of public health subjects all interested in public health movements in Minnesota.

Attendance is urged upon:

1. County Health Officers.
2. City, Township and Village Health Officers.
3. County Superintendents of Schools.
4. Local School Boards, Principals, and Teachers.
5. Representatives of Women's Clubs, Civic Federations, Commercial Clubs, and of all other Societies or Associations concerned in the public welfare.
6. Practicing physicians, ministers, state, county and municipal officers.
7. The general public.

Anyone interested in Public Health may become a member on application to the Board of Directors and payment of one dollar annual dues.

CHIEF TOPICS THIS YEAR

The Welfare of School Children.
Tuberculosis as a State Problem.
Infant Mortality.

The Future of Official Public Health Organization.
Insanity.

Papers are not to exceed 15 minutes in delivery.
Discussion is free and open to all in attendance.

At the conclusion of the regular program, a question box, provided for the reception of written questions from anyone who chooses to use it, will be opened, the questions answered and a general discussion of the subjects thus brought up will follow.

MINNESOTA STATE SANITARY CONFERENCE AN- NUAL MEETING

OCTOBER 4, 1911, 10 A. M.
HOTEL SAINT PAUL
ST. PAUL, MINN.

President: H. A. Tomlinson, M. D.
Vice President: J. T. Gerould.
Acting Secretary: H. W. Hill, M. D., D. P. H.

PROGRAM

1. Meeting called to order.
2. Roll call of Counties.
3. Minutes of last meeting.
4. Secretary-Treasurer's report.
5. Appointment by President of three members of the Board of Directors.
Three members of Legislative Committee;
Three members of Committee on Resolutions.
6. New business.
7. President's address.
H. A. Tomlinson, M. D. Superintendent State Hospital for Insane, St. Peter, Minn.
8. Report of Committee on the Relation of Public Health and Insanity.
A. S. Hamilton, M. D. Instructor in Nervous and Mental Diseases, University of Minnesota.
9. The Duty of the State in the Suppression of Tuberculosis.
W. J. Marckey, M. D. (Late Superintendent, Walker State Sanatorium.) State Tuberculosis Commission.
10. Infant Mortality.
J. T. Gerould, University of Minnesota.
11. The Infectious Disease Census of Minnesota School Children.
A. J. Chesley, M. D. Epidemiologist, Division of Epidemiology, Minnesota State Board of Health.
12. The Relation of General Medical School Supervision to Supervision for Discovery and Control of Infectious Diseases.
Chas. H. Keene, M. D. Supervisor of Hygiene and Physical Training, Minneapolis.
13. Hygienic Essentials in School Construction.
Prof. F. H. Bass, Director, Division of Engineering, Minnesota State Board of Health.
14. The Public School-Well Problem.
H. A. Whittaker, B. A. Chief of Chemical Laboratory, Minnesota State Board of Health.
15. Value of Cultures in Diphtheria.
R. H. Mullin, M. D. Director, Division of Laboratories, Minnesota State Board of Health.
16. Dusty Streets and Tuberculosis.
H. W. Hill, M. D., D. P. H. Director, Division of Epidemiology, Minnesota State Board of Health.
17. The Medical Practitioner as Health Officer.
J. A. Thabes, M. D., Brainerd.
18. The Status of County Public Health Supervision Throughout the United States.
H. M. Bracken, M. D. Secretary and Executive Officer Minnesota State Board of Health.
19. Public Health Supervision in Minnesota.
J. W. Robertson, M. D. President State Medical Society, Litchfield, Minn.
20. Amebic Dysentery in Minnesota.
21. Opening of Question Box.
22. Public Discussion.

The order of the papers may be somewhat changed. Discussion on each paper not to exceed 20 minutes. No one person in discussion to occupy more than five minutes consecutively.

EXHIBIT

The Minnesota State Board of Health will present exhibits as follows:

1. Work of the Tuberculosis Exhibit.
2. Work of the Laboratory Division.
3. Work of the Engineering Division.
4. Work of the Epidemiological Division.
5. Work of the Vital Statistics Division.
6. Work of the Lecture Bureau.

REPORTS OF SOCIETIES

STEARNS-BENTON COUNTY SOCIETY

The Society met at St. Cloud on August 24th, with sixteen members present.

Papers were read as follows:

"The Diagnosis and Early Treatment of Acute Poliomyelitis," by Dr. A. S. Hamilton, Minneapolis; "Special Treatment of Acute Poliomyelitis," by Dr. Emil S. Geist, Minneapolis; "Presentation of Clinical Cases," by Drs. Hilbert and Goehrs, and J. C. Boehm; "Clubfoot," by Dr. Wm. Friesleben, Sauk Rapids.

A thorough discussion followed the papers and the clinical cases, and interesting points were brought out.

The Society was entertained by Drs. Hilbert and Goehrs. A six o'clock dinner was served and all present were thoroughly entertained and had a good time.

The next meeting will be subject to the call of the Program Committee.

Dr. O. C. Trace, of Clear Lake, was admitted a member by transfer card. Dr. W. S. Hitchings, of Belgrade, was elected a new member, and Dr. Ernest A. Woods, of Woodville, Oregon, was reinstated, having been dropped by transfer card.

J. C. BOEHM, M. D., Secretary.

THE HENNEPIN COUNTY SOCIETY

A regular meeting of the Society was held in the Library Rooms, Donaldson Building, at 8 p. m., Sept. 4th.

In the absence of the President, the Second Vice President, Dr. W. D. Sheldon, presided. There were 38 members present. The minutes of the previous meeting were read and approved.

Dr. J. W. McDonald reported for the Necrologic Committee in regard to the life of Dr. J. T. Moore, as follows:

Dr. Jehiel Tuttle Moore was born in Oxford County, Ontario, Canada, on the 4th day of October, 1848. His early life was spent on his father's farm and his early education was obtained at the country district school. In 1868 and 1869 he attended the Canadian Literary Institute at Woodstock, Ontario, and in 1870 the Collegiate Institute of Gault, Ontario.

About this time he began the study of medicine as a pupil of Dr. Joy, and entered McGill University, from which he was graduated in

1874. He began the practice of his profession at Tillsonburg, Ontario, and in 1876 married Miss Frances Winifred Joy, the daughter of his preceptor. During the eight years of his residence at Tillsonburg he held the position of associate coroner for Oxford county, and was on the surgical staff of the Great Western railway.

In 1882, seeking a wider field, Dr. Moore came to Minneapolis, and in the following year took an active part in the organization of the Minneapolis College of Physicians and Surgeons, of which he was the dean until 1896, when the school became the Medical Department of Hamline University. From 1898 until its affiliation with the U. of M. in 1908 he held the position of vice- and acting-president. During the whole of this period of twenty-five years Dr. Moore filled the chair of Theory and Practice of Medicine. As a lecturer he was clear and systematic in his teaching, and his many students scattered over the Northwest hold him in grateful remembrance, not only on account of his scientific teachings but for his example in morality and Christian living.

During the last year of his life Dr. Moore was a great sufferer, yet persisted in his work with uncomplaining patience to within two days of his death, which occurred on August 19th, 1911. He is survived by his wife, Mrs. Florence W. Moore, and his daughter, Miss Maude Moore.

We cannot pay a more fitting tribute than to say that Dr. Moore reached the ideal of the poet, Crabbe,

"Glorious your aim, to ease the laboring heart.
To war with death, and stop his flying dart,
To trace the source whence the fierce contest
grew,

And life's short lease on easier terms renew,
To calm the frenzy of the burning brain,
And heal the tortures of imploring pain;

Or, when more powerful ills all efforts brave,
To ease the victim no device can save,
And smooth the stormy passage to the grave."

The following resolutions were adopted:

Whereas, Dr. Jehiel Tuttle Moore, for many years a member of this Society, has been called to rest from his labors,

Be it resolved, that The Hennepin County Medical Society in stated meeting assembled, express its appreciation of the character and life

work of Dr. Moore as a physician, a teacher, and lecturer on the Theory and Practice of Medicine, and a citizen of upright and honorable character, and

Be it further resolved, that the Society hereby tender heartfelt sympathy to the family of Dr. Moore in their bereavement.

And be it resolved, that a copy of this resolution be sent to Mrs. Moore and to Miss Moore, and be recorded in the transactions of the Society and published in The Northwestern Lancet.

Drs. Mair and Laurent were nominated for membership.

Dr. R. E. Farr presented two patients: one with nephrectomy after tuberculosis, with complete recovery, and the other carcinoma of the bowel, with operation and relief of stenosis. Dr. John E. Hines reported a case of poliomyelitis with a suspicion of contagion from a horse. The report was discussed by Drs. Chesley and A. S. Hamilton. Dr. F. L. Adair read a paper on "The Effects of the Momborg Tube." The paper was discussed by Dr. A. C. Strachauer.

Letters were read from several individuals, including Dr. Wiley, Secretary Hilles, Assistant-Secretary Hays, and the senators and representatives from Minnesota in reference to the resolutions adopted by the Hennepin County Medical Society in reference to the charges against Dr. Wiley.

DR. C. H. BRADLEY, Secretary.

NEWS ITEMS

Dr. J. J. Gelz, of Buffalo, Minn., has moved to Richmond, Minn.

Dr. E. A. Guton, of La Crosse, Wis., will move to Minneapolis.

Dr. Stephane Dulude, of Winsted, Minn., has moved to Hutchinson, Minn., to enter on practice.

Dr. Froshaug's new hospital building at Benson is well under way and work will be rapidly pushed.

Dr. John A. Vieregge, who had practiced in St. Paul since 1888, died September 17, after a brief illness.

Dr. Martin I. Olsen, of Minot, N. D., has gone to Europe for a year of special study, principally at Vienna.

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Dr. H. H. Smith, of the U. S. Army, has been transferred from the Philippines to Fort Lincoln, at Bismarck, S. D.

Dr. C. W. Maynard of the More Hospital at Eveleth has recently been married to Miss Mabel Haskins of Sioux City, Iowa.

Dr. Wm. Donohue, a graduate from the Northwestern University last year, has entered on practice at Manitowoc, Wis.

The Northwestern University of Chicago will hereafter demand two years of collegiate work of students entering its medical school.

Dr. L. H. MacNeill has moved from Columbus, N. D., to Sherwood, N. D., and become associated with Dr. M. J. Keyes, of the latter place.

The County Society of Valley City, N. D., has already begun plans for the entertainment of the State Association which meets there next year.

Dr. Carl M. Johnson, who was an interne at St. Barnabas Hospital, in Minneapolis, has formed a partnership with Dr. C. E. Rogers, of Montevideo.

Dr. Frank J. King of St. Thomas, N. D., has gone to Philadelphia for post-graduate work, and will locate in Grand Forks, N. D., upon his return.

Dr. H. E. French, the newly elected Dean of the Medical School of the North Dakota University, has recently taken up his duties at Grand Forks.

Dr. Harold Pederson of Twin Valley, Minn., will soon leave for Europe, where he expects to spend a year in special work. In his absence Dr. Thos. Arneson will have charge of his practice.

Dr. O. O. Benson, of Sacred Heart, Minn., has sold his practice to Dr. F. L. Hammerstrand, of Rankin, Ill., and has accepted a position in the Government Indian Reservation at Tower, Minn.

Dr. H. D. Valine, who had done pathological work at the St. Peter State Hospital for the Insane for many years, has taken charge of the laboratory of pathology and bacteriology at the Immanuel Hospital at Mankato, Minn.

The teachers of the state are showing great interest in the lectures offered by Dr. Bracken, which deal with elementary sanitary and health principles. Seventy-five requests for lectures before as many different groups of school teachers in Minnesota have been received.

At the annual meeting of the Hennepin County Registered Nurses Association, held at the home of the Association, 1502 Third Ave. So., September 13, 1911, the following officers were elected for the coming year: President, Miss Ethel Plimpton; first vice president, Miss Agnes Peterson; second vice president, Miss Margaret Kennedy; recording secretary, Miss Augusta E. Mettel; corresponding secretary, Miss Agnes Hope; treasurer, Mrs. Charlotte Roberts; directors, Miss Esther P. Rommel, Miss L. Louise Christenson, Miss Rachel O' Hara.

The Minnesota State Sanitary Conference will meet at 10 A. M., October 4, 1911, in the Hotel St. Paul, St. Paul. This is at the same place as, and the day preceding, the State Medical Association meeting. There will be about fifteen speakers on public-health subjects, and the meeting will continue during the morning and afternoon. County health officers are by statute entitled to attend this meeting at the expense of the county, which they represent. All county health officers are urged to be present. The conference is open also to all interested in public-health subjects. The program will be devoted largely to relations of public health to schools.

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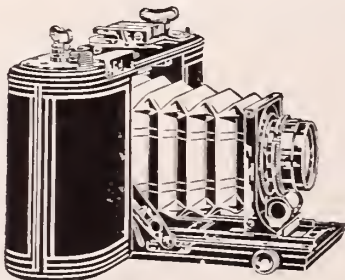
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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, OCTOBER 15, 1911

No. 20

CONDITIONS OTHER THAN APPENDICITIS IN THE RIGHT ILIAC FOSSA*

BY WARREN A. DENNIS, M. D.

ST. PAUL

The right iliac fossa is so often the site of surgical work, and the condition found is, in so large percentage of cases, some form of appendicitis, that we have become a little too ready to make this diagnosis and to operate upon the assumption that it is the correct one. To operate in this region, as in any other, without a careful study of the history of the case and a careful examination of the patient, both local and general, before the operation and, in addition to this, a careful inspection of the contiguous territory at the time of the operation, is to court the possibility of error in diagnosis, or of failure to relieve all the trouble present, even when the major point in the diagnosis is correct.

Every surgeon, no doubt, has had the unsatisfactory experience of finding that some of his cases operated upon for appendicitis and disclosing in the appendix at operation greater or less degrees of departure from the normal, have failed to be relieved of all their symptoms. Sometimes after operation only an indefinite distress is felt in the right iliac fossa, associated with constipation and its usual accompaniments, and it has been customary to ascribe the discomfort to the presence of post-operative adhesions, and to assure the patient that time would gradually remedy the condition. In some instances this was undoubtedly true, and time has witnessed the fulfilment of the prediction, but in

certain others no relief has come, for the reason that pathologic conditions other than appendicitis were present and unrecognized at the time of the operation. Chief among these conditions are diseases of the ureter, inflammation of Meckel's diverticulum, Jackson's membrane, and Lane's kink.

The diseases of the ureter most likely to be mistaken for appendicitis are stone and inflammation. A stone in passing downward from the renal pelvis to the bladder may lodge in the region of the appendix and cause pain and a point of tenderness that may prove quite misleading. Usually, however, a careful history of the pain will elicit the fact that earlier in the course of the trouble it was higher up in the loin, and only gradually worked downward to the right iliac fossa. Ordinarily also the paroxysms are accompanied by pain radiating downward along the groin to the genitals and down along the inside of the thigh. I have, however, observed severe kidney colic in which there was no radiation whatever of the pain.

Inflammation of the ureter, extending either downward from the pelvis of the kidney, or upward from the bladder, may result in a tender spot in the region of the appendix that is properly diagnosed only after a careful examination of the urine. I have occasionally met with a case of this kind that had been strongly advised to have the appendix removed. Needless to say, this procedure would have resulted only in

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

disappointment for the patient and chagrin for the surgeon. On the other hand, a severely inflamed appendix may by contiguity set up a ureteritis which will subside after the removal of the appendix.

Failure properly to locate ureteral conditions will not often occur if due care is taken in the examination of the urine and use is made of the x-ray and the ureteral catheter.

Meckel's diverticulum may occur anywhere within the terminal three feet of the ileum and may give rise to the same symptoms as inflammation in the appendix. It may be the cause of intussusception or, by adhesion to neighboring viscera or the abdominal wall, of obstruction of the bowel. A definite diagnosis is improbable, but the condition will usually be readily recognized when the abdomen is opened except in cases of acute inflammation with extensive adhesions or pus. Under these circumstances it may be necessary in order to distinguish it from the appendix to determine whether the organ in question arises from the small bowel or the large one, and the white line will be the diagnostic sign of first importance.

So far as treatment is concerned, it matters little whether the offender be the appendix or the diverticulum. Removal will be in order; but one wants to know positively which he has removed, as his patient with diverticulitis might subsequently be the victim of appendicitis, and the situation would be embarrassing if he believed his appendix had already been removed. A Meckel's diverticulum is, no doubt, the explanation of those cases from which the removal of a second appendix has been reported.

A little over two years ago, under the head of membranous pericolicitis, Jackson, of Kansas City, described a condition not infrequently found in the right iliac fossa, which up to that time had received no formal consideration. This has since been generally known as Jackson's membrane. It consists of a semitransparent veil-like tissue with unbranching, parallel coursing vessels, running from the parietal peritoneum downward and inward toward the head of the cecum. This membrane moves more or less freely over the surface of the gut, but is yet sufficiently short and fixed to interfere with its motility. We have all seen it many times, but it has ordinarily been regarded as a result of the trouble in the appendix and one that would disappear when its cause had been removed.

Jackson, however, is of the opinion that the

condition represents a definite pathologic entity and that it has a fairly plain symptom-complex. It must be differentiated especially from gall-stones and from appendicitis. He gives the following as the chief symptoms: pain, pretty general over the right side of the abdomen; tenderness over the same area, frequently most marked at the McBurney's point, but not limited to it; constipation, which is always present; and, in addition to these, mucus in the stools; distention with gas, especially in the cecal region; loss of weight; in time gastric symptoms, fermentative in character; and, finally, neurasthenia.

The condition is apparently the result of some cause which is slow in its action, like a chronic catarrhal or mechanical appendix, and not of an acute inflammation. Possibly the constant dragging effect of an enteroptosis may supply the necessary stimulus. Whatever the cause, the condition must be regarded as pathological, and, when met with, it should be corrected by the division of the bands and the removal of the false membrane, which must interfere with a proper peristaltic action in the bowel involved. Jackson has reported a number of cases in which he diagnosed this condition, and which were relieved by removal of the membrane. In some at least, he believed that the appendix was perfectly normal. He does not state definitely whether the appendix was removed each time, but it doubtless was and should have been. As intimated above, we are of the opinion that the condition is secondary, usually to a chronic appendicitis, though it is entirely conceivable that enteroptosis or even gall-stones or ulcers might, when the condition is found high in the ascending colon, be the primary cause.

Mr. Arbuthnot Lane, of London, has described another pathologic condition of the right iliac region which we have all surely frequently overlooked and which has been responsible for the failure of relief in some of the cases operated upon for subacute and chronic appendicitis. This condition has become known as the Lane kink, and is usually found at the lower end of the ileum within a few inches of the cecum. As its name indicates, it consists of a sharp U-shaped turn of the gut on itself with adhesions of the free margins of the two limbs of the U. Oftentimes there has been a rolling of the gut on its mesentery with adhesion to it, before the adhesion of gut to gut has taken place. In some instances the U is still further adherent to the

cecum. It is readily understood that the sharp turn with its adhesions must interfere with peristaltic action, and be productive of distention and pain when peristalsis is attempted at this point. This is especially true in those cases where the bowel is rolled on its long axis and adherent to its mesentery. In these cases the diameter of the bowel may be no greater than that of a finger and so firmly fixed that peristalsis must be next to impossible.

A case of this kind has recently left my care. The patient, a man of forty, was operated upon twelve years ago for appendicitis, but he had never been entirely relieved of his symptoms. There was a constant distress in the region, with tenderness on pressure. A few years after the appendix operation, he had developed a right inguinal hernia and it was thought that possibly this was responsible for the discomfort, but at operation occasion was taken to examine, through the large internal ring, the ileocecal region.

The site of the appendix was beyond criticism, but in the ileum there was found, just before its junction with the cecum, a condition like that described above. The ileum was rolled on its mesentery and so tightly adherent that careful dissection was necessary to free it. This portion of the ileum was, in addition, bent and formed an inverted U, the two limbs of which were adherent. The bowel was not more than one-third its normal diameter, but enlarged so as to become nearly normal as soon as the adhesions were all carefully dissected free. The patient's symptoms were entirely relieved.

An example of multiple Lane kinks came under my observation a short time ago. The patient, a woman of 26, had been operated on some years before for acute appendicitis and a year ago for obstruction of the bowels. She had many adhesions, besides several bands and one anastomosis, but the interesting point as concerns this paper was, that she had at least four Lane kinks of the character above described. The most pronounced was at the lower end of the ileum, and this one was relieved only with the greatest care, as the adhesions were old and dense. The diameter of the bowel at this point more than doubled as soon as it was freed.

The cause of the Lane kink is not fully determined. It has been most often observed in those suffering from enteroptosis and intestinal stasis. The mesentery of the terminal ileum is very short, and Martin says that "careful ex-

amination of these kinks leaves no explanation for their formation, except the one of traumatism to the comparatively fixed portion of the intestine, that is, the terminal few inches, due to an abnormal descent of the cecum, the balance of the ileum, and the overriding of the superimposed viscera." This explanation seems plausible, and yet it hardly seems applicable to three of the four kinks found in the case of obstruction mentioned. The aim of this paper is not to propose a theory of formation to cover all cases, but to call attention to the possibility of their being present in any case and the necessity for searching for and freeing them if found.

Most of us, at times in our careers, have prided ourselves upon the shortness of the time and the incision required for the removal of an interval appendix, and we have occasionally been disappointed in our failure completely to relieve the patient of his symptoms. The purpose of this paper is to call attention to the necessity for making an incision sufficiently long to permit of a thorough pathologic inspection of the entire region and the relief of other pathologic conditions, if found there. To remove an appendix, however diseased, and leave behind a condition producing a partial obstruction of the bowel, is to fail to relieve the patient and properly to bring discredit upon the work. In some instances the secondary or accompanying condition will be at once evident, but in many it will be apparent only when sought for, and accordingly a careful search with sufficient room for making it should be the rule in every case. Furthermore, such a search under such conditions will often disclose the unsuspected, or only suspected, presence of gall-stones, ulcer, or pelvic complications. The gridiron incision, which is the choice of most surgeons for work in this region, is easily made to admit the entire hand, and it is well adapted to meet the requirements of the recommendation above made.

DISCUSSION

DR. HARRY P. RITCHIE (St. Paul, Minn.): Meckel's diverticulum and stone in the ureter have long been known as conditions which must be excluded in the diagnosis of appendicitis. Other conditions requiring surgical attention have been brought to our notice within the last two years by Jackson and Lane. For many years the so-called membranes, kinks, and adhesions have been noticed, but were considered secondary to the appendix and left alone, in the belief that the removal of the appendix was sufficient to effect a cure.

I heard Jackson's paper when first read, and, as you know, he advises the bisection of the veil-like membrane so often found over the cecum and ascending

colon. As Dr. Dennis states, it occurs in other abdominal conditions, such as enteroptosis, and causes pain by mechanical obstruction to the normal motility of the cecum. Whether this membrane is formed secondary to the chronic inflammatory appendix or to the activity of the cecum in contact with the side wall of the pelvis is still an open question. We now believe that the presence of the membrane is a surgical condition and should be relieved. Mr. Lane, of London, has described an adhesion involving the last six inches of the ileum at its junction with the cecum. Those who have seen this condition can readily demonstrate that it is a surgical entity, and by its surgical relief straighten the bowel and increase its lumen, sometimes to almost double the size found. Such a condition must give symptoms of partial obstruction, causing constipation, sick-headache, gas, and various pains. Dr. Jackson believes that the condition described by Lane is but a continuation of his membrane.

As Dr. Dennis has said, by investigation of all cases of chronic appendicitis we may relieve a great many cases which we have hitherto attempted to cure only with an appendectomy and in some cases with not complete success.

DR. E. P. QUAIN (Bismarck): There has been some discussion of late as to whether the so-called "Jackson's veil" is an inflammatory product, remaining after the absorption of infectious material from the peritoneum, or whether it is of embryologic origin. Until Dr. Jackson described this condition as a pathological and therefore surgical entity, other surgeons had noticed the presence of this membrane, but had considered it nothing more than adhesions remaining after a local peritonitis. The appendix was usually blamed for the inflammation. Dr. Jackson, in discussing this question recently, stated that in his opinion the condition is an embryological displacement of tissues dragged along with the colon as it changes from its early position in the abdomen. The question is not yet settled.

In at least three cases of this type seen within the past year it has seemed to me that the fibrous adhesions certainly could not have been of embryologic origin. If the numerous adhesions and bands holding the colon to the abdominal wall were of embryologic origin the fibrous, membranous layer of the peritoneum would not be formed underneath these bands, but over them. The colon and the structures pertaining to it come into the abdominal cavity from behind, not through, the peritoneum in the embryo. Now, in these cases, after severing all the adhesions, the peritoneum—the fibrous layer of it—could be easily made out as a definite membrane running from the abdominal wall deeply

into a pocket at the side of the colon and then back over the gut. Moreover, small glistening areas of non-adherent normal serosa were found at various points in the adhesions, each area evidently communicating with the abdominal cavity. I am of the opinion that this membrane, or veil, is formed, not so much perhaps from the actual presence of bacteria in or on the peritoneum as from an irritation caused by toxins produced in the bowel or in the lymphatics associated with the retroperitoneal space.

Children are prone to acute infections,—gastro-intestinal, hepatic, and pulmonary. Their lymphatics are large and active, and an infection about the pylorus, liver, or right pleura may very readily be carried to the neighboring peritoneum. In a sick child the colon, distended and pressed against the anterior abdominal wall, forms a dam to the infection in the region referred to, and it must drain to the right of the colon and cecum. This may account for some of the inflammatory evidences found in the right side of the abdomen.

I feel somewhat different about the so-called "Lane's kink." In the two instances where I have treated this, it gave the impression that a very short, broadly attached mesentery confined the gut to the back. Lane, while believing the condition often due to inflammation at the head of the cecum, advises that a few inches of the ileum be resected in such cases. It may be that in some instances such ultra-radical treatment becomes necessary, but in our cases a plastic operation on the mesentery and gut was sufficient.

These conditions will be better studied and understood in the near future, for surgical teaching at present urges strongly more thorough exploration, through larger incisions and without hurry. The surgeon should pride himself more on knowing the exact condition of the various viscera than on the fact that he can do a given operation in five minutes.

DR. J. E. ENGSTAD (Grand Forks): Some time ago I had occasion to look up all of the available literature on this subject, and among others Jackson, and he said it is an embryological remnant, while others said it is due to an inflammatory process. I heard Dr. Charles Mayo state that it is not due to an inflammatory process, but to an embryological condition.

DR. DENNIS (Essayist): I wish to add just a word. I have the greatest respect for Dr. Mayo's opinion in regard to the formation of the membrane, but it seems to me, as Dr. Quain has said, the evidence tends to show that it is of inflammatory origin; otherwise I do not know how to account for the apparently normal serosa beneath the false membrane.

REPORT OF THE SECRETARY OF THE SPECIAL TUBERCULOSIS COMMISSION APPOINTED BY THE MINNESOTA STATE BOARD OF HEALTH

BY WALTER J. MARCLEY, M. D.

MINNEAPOLIS

To The State Board of Health:

As Secretary of your Special Tuberculosis Commission I have the honor to submit the following report:

The Commission, appointed by your Board and consisting of Dr. E. L. Tuohy, Duluth, Prof. E. V. Robinson, University of Minnesota, Dr. Geo. D. Head, Minneapolis, and Dr. Walter J. Marcley (Secretary), Minneapolis, held its first meeting Jan. 25, 1911, and organized, electing Dr. Tuohy chairman. Dr. Bracken was present for the purpose of explaining the creation of the Commission, the relationship of the State Board of Health to the work proposed for this Commission, and the policy of the State Board of Health in legislative matters.

The purpose of this Commission as outlined by Dr. Bracken was "To act as a disinterested and conservative body, being careful not to commit the State Board of Health to any uncertain or undesirable method; to get in touch with all legislative committees; to frame bills that are broad and open for use by all; and to suppress discord." He presented the following suggestive introductory outline of the ground to be covered:

"What kind of institution will you favor,—state, district, county, municipal, or private?"

"How shall the class of patients for each institution be determined upon,—acute tuberculous or advanced tuberculous?"

"If state, for each congressional district, shall the institution be only for the tuberculous? Shall it be under the present Tuberculosis Advisory Commission?"

"If the institution is county or municipal, who shall appoint the local commission? If county or municipal, shall they receive state aid? If state aid, through what body shall it be distributed?"

"Shall any provision be made for state aid to private sanatoria?"

The Commission has held two subsequent meetings, February 14th and March 30th. At each of the three meetings all members of the Commission were present. The Secretary has

had frequent individual conferences in person or by telephone with the other members of the Commission.

The conditions relative to tuberculosis which at the outset presented themselves to the Commission were these:

1. A State Sanatorium at Walker, accommodating seventy-five patients, under the management of the State Board of Control.

2. An Advisory Commission of the State Sanatorium, consisting of five physicians appointed by the Governor. Aside from the appointing of the examining physicians for the Sanatorium, this Commission has no control over the medical conduct of that institution.

3. The State Board of Control has asked the legislature of this year for about \$100,000 to enlarge the State Sanatorium, increasing the capacity from seventy-five to one hundred fifty.

4. Since the establishment of the institution at Walker three years ago 600 cases had been rejected from that institution because they were too ill or there was no room in the institution.

5. A statute passed two years ago permitting counties to establish sanatoria at the expense of the counties. St. Louis is the only county thus far which had taken advantage of this law. Six other counties, namely, Goodhue, Ottertail, Polk, Winona, Blue Earth, and Itasca were interested in this matter, and it was reported would perhaps in the near future take definite steps toward the establishment of county institutions.

6. A considerable difference of opinion on the part of those who were interested in the tuberculosis campaign, regarding the best plan to adopt in order to provide for more institutional care for the consumptives of the state, some of us believing we would get more immediate results and probably better supervision of the work if we should adopt a state plan and provide institutional care in state institutions, while others were of the opinion that state aid should be given to counties which would establish institutions under the law passed two years ago.

We were further confronted by the well-known

fact that we have 10,000 cases living in the state, all of whom should have institutional care for a few weeks at least, and also that at present we have in public and private institutions for the tuberculous, less than 350 beds all told, including the institution at Walker and the sanatorium in St. Louis County soon to be opened.

From a consideration of these conditions it became evident to this Commission that the men and women in the state who are interested in the eradication of tuberculosis should get together and, working harmoniously, should make an organized effort to have provided as soon as possible institutional care for more cases, that these institutions should be under proper medical control, and, as the legislative session was well under way, it was necessary to have presented to that body at the earliest possible date such measures as we wished to have acted upon at this session.

The Commission was further of the opinion,—

That the enlargement of the institution at Walker, as proposed by the State Board of Control, should be endorsed.

That some change should be made in the law creating the Advisory Commission of the State Sanatorium whereby that Commission would have control of the medical conduct of the Walker institution and of other institutions which may be established; that this central governing board should in some way be closely affiliated with the State Board of Health, if not made a part of that Board; and that general measures pertaining to the control of tuberculosis should be included in the bill.

The secretary of this Commission has had frequent conferences with the chairman of the Advisory Commission of the State Sanatorium, with representatives of the various organizations in the state interested in the subject, and especially with the secretary of the Minnesota Association for the Prevention and Relief of Tuberculosis, who had previously made a thorough study of the conditions and needs of the state. He has spent a great deal of time in interviewing people and in attempting to carry out one suggestion of your executive officer, namely, to suppress discord.

The bill known as the "Sanatorium Bill" and presented to your Board under date of February 18th, was the result of a careful study of the subject by this Commission, and, with slight changes made subsequently, was the final product of the various conferences above mentioned. It was endorsed by all those who are actively en-

gaged in the tuberculosis campaign in this state. I may say this bill in all its details was not perfectly satisfactory to any one. It was a compromise, but it contained the two essentials in providing for: First, money to build, equip, and maintain institutions for all classes of consumptives; second, a State Tuberculosis Commission to have control of all affairs except financial of the institutions, and to make a further and continuous study of the existing conditions regarding tuberculosis in Minnesota and the methods that should be employed in the control of the disease.

The county plan with proposed state aid *versus* the state system had been thoroughly considered and discussed. It was agreed that a combined county or district system of institutions, as set forth in this bill, was most desirable; that these sanatoria should admit all classes of pulmonary tuberculosis; that counties should be compelled to pay a fixed charge in these institutions for those who were unable to pay for themselves; and that the local interest and initiative in this question, given as the strongest feature favoring the county plan of institutions, should rest with the local district commissions having charge of the district sanatoria, under the control of the state commission, employing visiting nurses when desirable, and in various ways conducting educational campaigns radiating from the local institutions.

This bill was introduced March 7th in both the Senate and the House of Representatives by the Committees on Public Health and Pure Food. There appeared to be a general sentiment in favor of the bill except that some criticism was offered on the proposal to make a general tax levy to raise funds for the work. This feature of the bill was opposed finally by the Finance Committee of the Senate and the Appropriation Committee of the House, and a direct appropriation was proposed, cutting down our request from \$360,000, provided by tax levy for the first year, to \$40,000, and for the second year the same amount was allowed in place of the \$250,000 which the tax levy would have provided. With this amendment the bill was reported out favorably by the committees on financial affairs. The bill was passed by the Senate without discussion and with no opposing voice on April 15th. It was on the special calendar for the last evening of the session in the House, but it failed to be reached for lack of time. Had the time-honored custom of turning back the clock been observed in the House, as it was in

the Senate, the bill would undoubtedly have become a law. Following is the bill in complete form as amended and passed by the Senate:

S. F. No. 602.

Introduced by the Committee on Public Health,
March 7, 1911.

A BILL

For an Act to Create the State Tuberculosis Commission and to Establish and Maintain Public District Tuberculosis Sanatoria.

Be it enacted by the Legislature of the State of Minnesota:

Section 1. The Advisory Commission of the State Sanatorium for Consumptives shall hereafter be known as the State Tuberculosis Commission and shall consist of the five licensed physicians now appointed and acting under and pursuant to Section 1927, R. L. of Minnesota, 1905, and who shall hold office for seven years from the time each was appointed, and in addition thereto the governor shall previous to the first Monday in July, 1911, appoint two citizens who are not practicing physicians and who have special knowledge of the administrative control of tuberculosis, one of whom shall be appointed for a term of one year and the other for two years, and thereafter each of their successors shall be appointed for a term of seven years; and previous to the first Monday in July of each year thereafter the Governor shall in like manner appoint a successor to the person on said Commission whose term of office expires July first following; but in all cases the Commission shall consist of five practicing physicians and two citizens who are not practicing physicians; and in addition to these seven members the executive officer of the State Board of Health and the president of the Minnesota Association for the Prevention and Relief of Tuberculosis shall be members ex officio. No member shall receive any compensation for his services as such, but shall be allowed necessary expenses incurred in the performance of his duties payable by the state. One or more members of said Commission shall visit each district sanatorium at least once a year.

Sec. 2. The State Tuberculosis Commission is hereby authorized to establish and maintain in one or more of the districts of the state corresponding to the congressional districts now existing one or more tuberculosis sanatoria for not less than thirty patients each, and the total amount expended for erection of buildings suitable for the care and treatment of tuberculosis and for the equipment and furnishing of said buildings ready for occupancy shall not exceed one thousand (1,000) dollars per bed, exclusive of the cost of site and of suitable water supply and proper disposal of sewage; it shall appoint in districts of the state corresponding to the congressional districts one or more district tuberculosis commissions, each of said district commissions to be made up of three members, one of whom shall be a practicing physician in good standing. Said members of each district commission shall be residents of the district and preference in appointment shall be given to persons who have had some experience in social or charitable work. Under the first appointment, one member shall be appointed for one year, and one for two years and one for three

years from July first; and thereafter one member shall be appointed each year to serve for a period of three years from July first. The members of said commission shall serve without compensation or financial benefit, but shall be entitled to reimbursement for all actual expenses in connection with their official duties. The State Tuberculosis Commission shall approve the site for any district sanatorium and shall determine in what county of the district any of the said sanatoria shall be located; in conjunction with the District Commission it shall approve the plans of construction of any district sanatorium building hereinafter provided for; it shall appoint such examining physicians as may seem to it advisable and the fee for each examination shall be \$3.00, payable by the state out of funds hereinafter provided for the maintenance of said sanatoria; it shall if necessary engage non-resident medical directors for any sanatorium; it shall establish rules regulating the admission and discharge of patients; it shall prescribe the medical and statistical records to be kept at the said sanatoria and shall approve the forms of such records; it shall have supervising control of the medical conduct of any sanatorium herein provided for, including the quantity and quality of food supplies, and shall make such regulations pertaining to said control as may to it seem advisable; it shall have the power to engage a paid agent who shall act as secretary and executive officer of the commission; it may grant financial aid to approved visiting nursing associations or to county boards paying for visiting nursing. At the expense of the state it may investigate conditions regarding tuberculosis in Minnesota and study the methods employed in the control of tuberculosis in other states.

Sec. 3. Each of said district tuberculosis commissions shall select the site for its district sanatorium; subject to the approval of the State Tuberculosis Commission it shall nominate and the State Board of Control shall appoint when any sanatorium is ready for equipment, a competent superintendent who shall engage other necessary employees. The superintendent shall be secretary of the district commission. Subject to the supervising regulations of the State Tuberculosis Commission, the district commission shall control the general conduct of the sanatorium and may establish and maintain tuberculosis dispensaries. Each District Commission shall visit the sanatorium of its district at least once every month. The members of said District Commission shall qualify by subscribing to and taking the usual oath of office, and shall hold office as indicated above or until their successors are appointed and approved and have qualified.

Sec. 4. The County Board of any county which has established a sanatorium under the provisions of Chapter 347, Laws of 1909, or entered into any contracts therefor or toward that end, is hereby authorized to sell and convey such entire property to the state, in fee simple, and the State Board of Control shall purchase the same at such price and upon such terms as may be mutually agreed upon, when sufficient money is available therefor, but not for any sum greater than has been expended or contracted therefor exclusive of maintenance cost, and when so acquired by the state it shall become a District Sanatorium as herein provided for.

It shall be the duty of the State Board of Control

to purchase necessary sites provided that such sites have been previously approved by the State Tuberculosis Commission, and in accordance with the plans and specifications approved by the said Tuberculosis Commission and the District Commission shall construct the building or buildings for any sanatorium, and shall equip and furnish the same ready for occupancy; the State Board of Control shall have control of all financial affairs of the District Sanatoria herein provided for.

Sec. 5. The State Sanatorium now existing at Walker in this state under Section 1927, R. L. of Minnesota, 1905, shall be considered as one of the district sanatoria pursuant to the provisions of this act, except that the State Board of Control shall expend for the benefit of the state sanatorium at Walker all sums of money available to such board for its maintenance and for the erection, repair and improvement of its buildings and for the improvement of its grounds, and in any way appropriated for any or all such purposes.

Sec. 6. Any resident of this state who is afflicted with tuberculosis in any stage may apply for admission to any sanatorium in the district in which he is resident, and subject to the rules for admission established by the State Tuberculosis Commission shall be eligible for treatment in any sanatorium under the supervision of the State Tuberculosis Commission; or any licensed physician, visiting nurse, charity worker, humane officer, health officer, or any other person may apply on behalf of such individual. The State Board of Control and the State Tuberculosis Commission shall fix the amount to be charged for care and treatment in any district sanatorium which the patient shall pay except as hereinafter provided. The District Tuberculosis Commission shall ascertain the legal residence of all cases admitted, and no person who is a legal resident of Minnesota shall be refused admission to any sanatorium because he cannot pay the fixed charges for treatment. A patient who in the opinion of the District Tuberculosis Commission is found after admission to be unable to pay said charges, and who is without kindred legally liable therefor and able to pay shall be cared for notwithstanding and the county in which said patient has a residence shall pay the fixed charge for his care and treatment.

Sec. 7. There is hereby appropriated out of any money in the State Treasury not otherwise appropriated for carrying out the purposes and provisions of this act the sum of forty thousand (40,000) dollars for each of the years ending July 31, 1912, and July 31, 1913.

Sec. 8. The State Tuberculosis Commission or any District Tuberculosis Commission is empowered to accept as a trust any gift, donation or fund from any other source, whether subject to the special provisions of the donors or not, and such gift, donation or funds shall be deposited in the treasury of the State of Minnesota, and shall be disbursed by the State Board of Control upon the recommendation of the Commission accepting such gift, donation or fund, and is hereby appropriated for that purpose.

Sec. 9. All Acts or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

Sec. 10. This Act shall take effect and be in force from and after its passage.

Another bill providing for the control of tuberculosis as a communicable disease was introduced in the Senate March 6th. The main points of this bill were:

Compulsory reporting of all cases of tuberculosis.

The isolation of consumptives in almshouses and poorfarms.

The forcible removal of a consumptive from his home when necessary.

The removal from the schools of teacher, pupil, or employee who has tuberculosis in an infective stage, and requiring children coming from homes where pulmonary tuberculosis is known to have existed to present a certificate from a health officer.

The disinfection of apartments where consumptives have lived or died.

This bill was passed in the Senate March 29th and would undoubtedly have been passed in the House if it had been introduced in that body simultaneously with its introduction in the Senate. The bill was on the final calendar and failed to pass for lack of time.

A third bill providing for \$10,000 to be used by the State Board of Health for small portable tuberculosis exhibits in the country schools was killed in the House Committee on Appropriations.

A fourth bill giving the State Tuberculosis Commission funds for expenses was introduced late in the session. It was thought necessary to have money available at once for the Commission in case the provision for a tax levy should be favorably passed. This bill called for \$8,000. The bill was about to meet its death in the Finance Committee of the Senate when, through special effort, we were able to have \$500 allowed by that committee. The bill was passed carrying this amount, and this stands today available for the State Tuberculosis Commission, which does not exist.

A bill resulting indirectly from suggestions made by this office was introduced by Senator Sundberg and Representative Mattson and was passed. It permits counties to appropriate money for the purpose of employing visiting nurses, for disinfecting, and for necessary medical attention or advice in preventing the spread of tuberculosis in the county.

Another bill, with which we were not in any way connected, relating to the revocation and suspension of teachers' certificates provided that "affliction with tuberculosis or some communi-

cable disease shall be considered as cause for the suspension of certificate while the holder thereof is suffering from such disability." This bill was passed.

Although the time was short for a thorough survey of the field and the proper preparation of legislative matters, yet the bills which were presented were comprehensive and provided for a well-established plan of campaign for the prevention of tuberculosis. The result is exceedingly regrettable because not only are we unable to provide more beds for the sick, but we have failed in our attempt to establish a state commission to solve the tuberculosis problems as they arise from time to time.

From my experience as secretary of this Commission for the past three months, and judging from the very evident unfriendly attitude of the recent legislature toward other matters of public health, I believe there should be continued a thorough systematic study of the subject, and a well-thought-out scheme of presentation should be formulated, looking toward the next session

of the legislature, in order that satisfactory legislation may result; and for this purpose I would suggest that at an early date a legislative committee be organized consisting of representatives of the various associations in the state interested in public health matters, including the State Medical Association, the State Board of Health, the State Sanitary Conference, the State Conference of Charities and Corrections, the State University, the State Board of Control, the State Federation of Women's Clubs, the State Department of Labor, the State Sanatorium Advisory Commission, the Minnesota Association for the Prevention and Relief of Tuberculosis, the Anti-tuberculosis Committee of the Minneapolis Associated Charities, the St. Paul Antituberculosis Committee, the St. Louis County Sanatorium Association, and other similar bodies.

In my work Dr. Bracken has given me most friendly assistance and valuable counsel for which I wish here to express my gratitude.

Respectfully submitted,

WALTER J. MARCLEY.

April 25, 1911.

THE MENTAL DEFECTIVE AND HIS RELATION TO CRIMINALITY*

BY O. H. WOLNER, M. D.

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ST. CLOUD, MINN.

The subject of this paper is so large and my remarks will cover so much ground that they must be, of necessity, more or less rambling.

Criminality is becoming more and more generally recognized as a diseased condition of the mind, brought about by a diseased condition of the body or a defective or degenerate condition due to a lack of education along moral and industrial lines, to living-quarters in foul air, and to food of poor quality,—all tending to weaken the will of the individual who already has a weakened mentality.

In order to prevent the mental defective, the ground covered by Dr. Scharpf of Indianapolis in his paper would not alone correct the evil by any means, and would only prevent a small number of defectives and criminals. It does not get entirely at the conditions which are the causes of criminals and defectives. You see I

bring in criminals with defectives. I consider them closely related, not in the sense that all criminals have permanent defects, but that their minds are in a diseased state, in that they have been weakened by excesses in liquor, sexual indulgence, overwork, lack of work, lack of proper amount of sleep and out-door exercise, etc., for all have a bearing on the mental defective and the production of the criminal.

There is an opportunity of grading criminals and classifying them as there is amongst the different forms of insanity, and as the work is more carefully gone into there will be a more definite working basis whereby there can be a surer knowledge of the results to be expected after a prisoner or inmate leaves an institution.

There is no doubt that, except in cases of criminality with a pure mental defect which is permanent and which disables the individual from ever being able to earn an honest living,

*Read before the Stearns-Benton County Medical Society, October, 1910.

these men can be restored to society and become a valuable asset to the community.

While a great deal depends on the individual, more depends on the encouragement, the environment, and the moral, physical, and mental education that the individual receives. That mental defectives are capable of doing great service for the world has been proven by the works of some of the most noted defectives; for example, Napoleon, who was known as an epileptic, and many others who are famous, especially in the arts. On account of their mental defects, their minds do not travel in the recognized channels and they thus originate new ideas and so serve the world to great advantage.

Before we institute the method of Dr. Scharpf we should look after the prevention of the production of defectives, not only by the education of the ones already defective and by their segregation and sterilization, but by a general education which will not only cover moral and physical phases of the individual in question, but which will cover all conditions relating to the healthy mind and body of individuals and show to the people at large that in order to make each individual self-sustaining, it is absolutely necessary that each individual shall have a healthy body and a healthy mind, and that only by having this can one fully enjoy life.

Professor Hugo Munsterberg, of Harvard University (professor in psychology), demonstrated to his own satisfaction that the working of the mind is injured by the use of small amounts of alcohol in the form of beer or wine, yet, having been brought up to use it, he had not before recognized the harmfulness of it, but he satisfied himself that while it stimulated the brain to greater activity at the time, the reaction more than counteracted the stimulating effect. That the use of tobacco, tea, and coffee, in fact, any narcotic, has a permanent effect on the mentality of the individual all know. Therefore society having manufactured mental defectives must take care of them. How is it to be done? Well, in medicine we always study up the cause, and then we can apply the remedy with some degree of success.

If defects are caused by lack of development, we must correct this condition as soon as possible. In order to remedy these defects the employment of experts along these lines would greatly benefit the individual under observation and might be the means of saving this individual from a permanent defect. The hopelessness expressed in a good many institutions and the

atmosphere of utter oblivion are enough to add to the mental defect of the inmates, instead of ameliorating it.

That there are a good many in institutions, penal and otherwise, who are permanent mental defectives, and that they need special provision and should not be allowed their freedom under any conditions, is clearly recognized by all who have made this their life-work, but that to desex them and allow them their liberty would be adding crime and immorality and breeding it in the communities where these individuals were sent, as they would still have their mental defect, and it would lead them further in their immoral relations than ever before. If the individual is past hope, after careful study, it is better I should think to take charge of him permanently and segregate him. He might be an asset to the state while in confinement; otherwise he surely would be an expense, and, besides, contaminate the minds of others with his immoral and degenerate practices.

The study of psychology is bringing about many changes and is bringing to light the causes of defects. Being connected with a penal institution I am more interested along these lines, and my remaining remarks will refer to this class.

The old theory for the cure of the criminal was punishment. There is no more psychological basis for this than there is for the punishment of the insane. The insane and criminal are closely allied; each is produced by the same conditions, as stated in the first part of this paper.

In the Minnesota State Reformatory the release of a man depends much on psychological conclusions, taking into consideration the man's prospects after leaving the institution; therefore the necessity for men having a thorough knowledge of psychology to judge the strength of the mentality of these individuals.

There is a continual cry in medical journals that there is a surplus of medical men. This is true only if they continue in the old lines, but there are fields open to medical men that have never been touched yet, and one is the mental defective cause and its prevention and cure. These men are seen not only in reformatories, prisons, and imbecile institutes, but in every town and hamlet; and the prevention lies as much with the home physician as with any one.

There are many who, if taken in time, could be prevented from entering this category. The symptoms may come on at first in the form

of epilepsy, chorea, hysteria, menstrual disorders, neuralgia, headaches, mental backwardness, incorrigibility, feeble-mindedness, neurasthenia, incipient melancholia, confusion after attacks of typhoid, scarlet fever, pneumonia, malaria, and la grippe, or in the form of dipsomania, sexual perversion, and drug-addictions.

The public should be educated to recognize these signs and to bring the individual at once to his medical adviser, who should be able to take cognizance of the seriousness of the condition and what it is liable to lead to. If all these cases were duly recognized and were sent away where all their physical defects could be treated, either by surgery or drugs, or by massage, electricity, hydrotherapy, employment, amusement, exercise in the fresh air, sunshine, healthful suggestion, discipline, and isolation from home surroundings, we should have fewer in our insane asylums, imbecile institutes, reformatories, and prisons.

The newer methods of treating criminals should be carried out in all towns with jails. The habit of locking up individuals, innocent or guilty, in poorly ventilated cells with poor food, no exercise, and bad moral atmosphere, is detrimental to the individual and tends to the creation of defectives. If all towns had jails where persons who are put into them could have some active employment in a good wholesome atmosphere, it would produce a revenue for the towns and tend to the cure of the criminal, instead of aggravating his already diseased mental condition by confinement.

Habitual criminals are permanent defectives. They have no desire to forsake their past and cannot, and they glory in devilment.

Punishment will never diminish crime or cure defectives, or stop the production of this class, but the education of the public in physical and moral laws and the thorough understanding of the laws that govern criminality, degeneracy, imbecility and insanity will accomplish much.

We, as physicians, all recognize the fact that the sooner a disease is treated the better the chance of recovery, therefore there should be no delay in sending criminals, imbeciles, insane and defectives to institutions for care and treatment. That some will be recognized as curable and others as incurable, and that the latter should be separated from the former, and be permanently segregated from the public, is the opinion of the foremost teachers along these lines.

The idea of treatment and the cure of the condition should be permanent in the minds of all public officials, of physicians, judges, attorneys, superintendents of institutions, etc. The sooner the defective gets under expert care and attention the better his chances for recovery, if there are any; and if there are not, the better for the public at large. It is also better that defectives be segregated on account of the detrimental influence they have on developing minds and characters.

All emigrants coming into this country should show a good history before being allowed to pass the custom-house supervisors and disembark.

TOXEMIA OF PREGNANCY*

BY LESTER W. DAY, M. D.

MINNEAPOLIS

I shall confine this paper to a discussion of the symptomatology, diagnosis, pathology, and etiology of the toxemias of pregnancy as determined in the past ten years. The discussion still waxes fast and furious, and while much has been definitely set aside as accepted or rejected, many mooted points are still left to be decided. Formerly we thought that eclampsia, pernicious vomiting of pregnancy, acute yellow atrophy, and pregnancy kidney were distinct entities. Today the majority think differently, though I must admit there are still some gaps to fill in the evidence.

As early as 1888 Klebbs pointed out that eclampsia may show the hepatic lesions of acute yellow atrophy. Lindemann, Dumose, Champetier de Ribes, and Bouffe de Saint Blais have reported fatal cases of vomiting in pregnancy in which the autopsy showed lesions of the liver, kidney, and other organs identical with those observed in eclampsia. Ewing and Stone conclude that both vomiting of pregnancy and eclampsia are closely allied conditions and are associated with similar hepatic lesions and therefore should be grouped together under a common heading, toxemia of pregnancy. Edgar has advanced similar views based upon Ewing's findings.

*Read before the Hennepin County Medical Society, Nov. 24, 1910.

E. H. Tweedy, 1908, principal expounder of the Rotunda Theory, or the theory of a general toxemia, holds that the severe headaches, pernicious vomiting, and albuminurea should be classified with eclampsia and regarded as having a common cause.

J. S. Lawrence, in his recent review of the literature of eclampsia, says, in speaking of Tweedy's theory, that, though little or no actual experimental work has been done in its behalf, it is a curious fact that it apparently receives yearly increased strength by the work done in the laboratory on the other theories. Holland, 1909, says in his exhaustive review: "Eclampsia is now known to be only one manifestation of a profound disturbance of the body during pregnancy; and eclampsia, toxic vomiting, and acute yellow atrophy of the liver present similar pathological pictures, differing only in degree."

J. Whitridge Williams, on the other hand, in 1906, writes: "From a pathological point of view the lesions of eclampsia and pernicious vomiting of pregnancy differ so markedly that I do not see how it is possible for any one who has once observed them to consider that they are at all related."

Schmorl upholds Williams, as does Opie, regarding the liver changes in the two conditions.

Before taking up my subject in detail, it is essential that I explain what is meant by *cell ferments* and *autolysis*. It is now understood that every cell has intracellular ferments or enzymes. These exercise an all-important function in the metabolism of the cell, which depends on them for the assimilation of food stuffs brought by the lymph and blood. Normally, they exist in a very firm combination with the protoplasm and have no action on the cell itself; their action is limited entirely to the fluids circulating around it. Some cells have more ferments and stronger ones than others; of these the liver and placenta are examples. The ferments are of many varieties. The most important one of which is a proteolytic ferment, which can break down protein into its ultimate constituents. Other ferments are lipolytic, breaking down fats, and glycolytic, breaking down carbohydrates. In the normal state of affairs, these ferments all work together for the good of the cell. It is quite otherwise when the integrity of the cell is impaired, or when the activity of the ferments themselves is abnormally raised. They then turn upon the cell and attack it, breaking down the protoplasm. This process is known as autolysis. Pathologically, autolysis may occur during

life; it may occur even physiologically, but in small degree, though in involution of the uterus it plays the chief part. It always occurs in the tissues after death.

Definition.—The toxemia of pregnancy may be defined as an intoxication of the body caused by the passage of ferments and autolytic products from the placenta into the circulation, the principal effect of which is increased coagulability of the blood and the activation of autolytic ferments in other parts of the body, such as the liver, ductless glands, intestines, and kidneys. The result of this protein disintegration is manifested, ordinarily, by trivial ailments,—nervous irritability, nausea, vomiting, headache, and swelling of the hands and feet, but, exceptionally, by serious, even pernicious, manifestations, such as acute yellow atrophy, pernicious vomiting, or eclampsia. Observation of patients during pregnancy shows that toxemia is most apt to develop, first, in the early months while the placenta is forming, or second, in the later months when the placenta has reached its fullest development.

Most physicians in the past and many physicians even now, depend upon the presence of albumin in the urine for the recognition of toxemia. Today the experienced obstetrician should be able to recognize developing toxemia without the examination of the urine, for, very frequently the toxemia has advanced even to eclampsia without albumin appearing in the urine. What, then, are the symptoms of toxemia of pregnancy?

Nervous System.—The nervous system exhibits an abnormal state. Apathy, melancholia, neuralgic pains, hebetude, anorexia, exaggerated reflexes, deficient or exaggerated action of the secretory nerves, epigastric crisis and disturbances in special senses, are all symptoms of this condition.

Circulatory System.—The circulatory system shows as its most prominent symptom altered pulse-tension of two sorts: (1) the slow, heavy, constantly high-tensioned pulse, which is readily recognized; (2) a more dangerous variety, because so easily overlooked, is the rapid pulse whose tension is not at first raised, but which develops high tension upon very slight disturbance. In chronic toxemia with damaged heart, we observe feeble heart-action and rapid pulse with low tension. In thyroid toxemia, rapid pulse without high tension is present. In intestinal toxemia, rapid pulse without high tension is observed, and when hepatic toxemia has

caused degeneration of the epithelia of the kidneys, the pulse-tension is usually high.

Thus we see that the rapidity of the pulse does not coincide with its tension. The average pregnant woman in good health, has a pulse-tension not exceeding 130 mm. of mercury. In gradually developing toxemia this tension rises in accordance with the various organs involved until just previous to convulsions, when a tension of over 200 mm. of mercury is often observed. Right here let me urge the importance of not depending upon one's fingers to determine blood-pressure. Like the other senses, touch has its limitations, and the terms used in describing its findings are not definite. Dr. Oliver, of London, has several times demonstrated that arteries of small caliber, but with very high arterial pressure, have been passed by well-trained fingers as being of moderate or normal pressure.

Asphyxia and venous engorgement are present in some cases with edema, and in others with erythema and petechial eruptions. The anemia secondary to toxemia, so dangerous a condition in severe cases, may be clinically observed by noting the color of the mucous membranes, a dark, vivid red, the flushed condition of the face, the slight jaundice, which is so often present, and the evidences of hematin staining in different portions of the skin. Coffee-ground vomit and the discharge of coffee-ground material from the bowels are conclusive evidences of the altered condition of the blood.

White Corpuscles.—In normal pregnancy, there are great alterations in the number of leucocytes. Cartin, in 1904, found that in the last months of pregnancy the numbers varied from 8,000 to 15,000; in labor, especially in primigravidae, there is a further increase. In twin pregnancy the numbers are still higher.

In multipara the changes are not so constant. In 50 per cent the number was normal during pregnancy, but during labor and immediately after delivery of the placenta, he always found a rise, even if a small one.

In toxic pregnancy the number of white corpuscles is much greater than in normal pregnancy. Dienst found an average of 26,000 before labor, and 40,000 immediately after. In many cases there is a rapid diminution after labor is over. The importance of this leucocytosis is not understood, though Dienst advanced the idea that the fibrinogen sprang from them, and that fibrinogen was the cause of the disease.

Red-Blood Corpuscles.—Zangemeister and others have shown that in toxemia the red-blood

corpuscles are apt to be increased in number, in some cases reaching as high as 9,360,000. The number varies from time to time in the same case, and there is great variation in the number of red-blood corpuscles in different cases. The evidence seems to be in favor of the increase being a relative one, due to a rapid passage of plasma from the blood-vessels to the tissues.

Alkalinity of the Blood.—Zangmeister (1903) estimated the alkalinity of the blood by Zuntz's method in normal pregnancy and in eclampsia. In normal pregnancy he found—

Maximum, 0.248 gms. NaOH in 100 ccm. of blood.

Minimum, 0.166 gms. NaOH in 100 ccm. of blood.

Average, 0.202 gms. NaOH in 100 ccm. of blood.

In eclampsia the alkalinity is diminished, but there are wide variations between different cases. In many severe cases the alkalinity is normal or nearly so. His figures for 20 cases were as follows:

Maximum0.218

Minimum0.048

Average0.153

The variations are accounted for by differences in the amount of urine excreted in different cases. Diminished diuresis means retention of acids in the blood. Zweibel found this acid to be lactic acid, which he found in 17 cases of eclampsia. He considers the lactic acid to be a disintegration product of protein.

Molecular Concentration of the Blood.—This is estimated by determining the freezing-point. A lower freezing-point than normal indicates retention in the blood of substances of a low molecular value and a disturbance in the eliminating function of the kidney. In normal blood the freezing point is 0.56° C. Schroeder found the freezing-point lowered in two cases, but all other observers have found it either about the same or slightly increased. The conclusion is, therefore, that the molecular concentration of eclamptic blood is, if anything, less than normal blood. This shows that there is no retention of urinary constituents and no disturbance of total renal function, as in uremia, in which the freezing-point is as low as minus 0.6° C.

Thorax.—In examining the thorax, not only should the condition of the heart be investigated, but substernal pain should be sought as a symptom of great importance. This often accompanies pressure upon the tip of the sternum, but in some cases it extends upward beneath the

entire surface of the sternum. In severe toxemia with crisis without convulsions there is a constant tendency to pulmonary edema, which can be detected by altered signs at the base of the lungs.

Abdomen.—Physical examination of the abdomen in toxemia gives tenderness at the epigastrium and in the right hypochondrium with more or less impaired peristalsis of the bowels and a tendency to the accumulation of gas. The uterine muscle is irritable unless the toxemia be so severe that all the muscular tissues infiltrated with poisoned blood become partially paretic. Fetal-heart sounds are quickened, or, in some severe cases, dangerously slow. Fetal movements may be accentuated or lessened.

Exophthalmos.—In many toxic patients a distinct tendency to exophthalmos may be observed, and the thyroid gland is found altered upon physical examination.

Urine.—From the time that Lever, of Guy's Hospital, 1843, observed albumin in the urine of eclamptics, the attention of physicians has been directed to the kidneys in this class of cases. As the urine was only examined after attacks of eclampsia had begun, and as albumin was always found, the early writers supposed albuminuria to be a constant finding. But that the urine does not necessarily contain albumin at the time of eclamptic attack has been demonstrated by a great number of investigators. Schroeder, Ingerslen, and Charpentier, respectively, collected 62, 112, and 143 such cases from the literature.

Generally speaking, the urinary findings in the toxemia of pregnancy are sufficiently numerous and varied to discourage classification. It may be accepted as a general fact, however, that some time before an outbreak (in some cases for weeks, in others for days or it may be hours) the urine will be diminished in amount (the average amount in health is 59 ounces), highly colored, and contain albumin, in larger or smaller quantities, casts, and a diminished amount of urea. The explanation of the diminished amount of urea is, partly, that the liver, as we shall explain later, being to a greater or less extent incapacitated, is unable to convert the higher nitrogenous compounds into the ordinary end-product, namely, urea, and partly because the ammonia combines with the free lactic acid in maintaining the normal alkalinity of the blood. In consequence, instead of the normal amount of urea we have a diminished quantity of urea. For this reason the proteid derivatives, principally amido-acids and ammonia, which are

normally combined by the liver into urea, are no longer combined, but circulate free in the blood in poisonous form, and are to some extent excreted by the kidneys. Instead of urea we find uric acid, ammonia, leucin, and tyrosin, and other unoxidized proteid radicals, and instead of sulphates there are unoxidized sulphur compounds.

The significance of serum albumin in the urine depends upon its quantity and whether or not it is accompanied by kidney debris. A large quantity of serum albumin with granular, fatty, or blood casts, indicates kidneys whose epithelia are badly damaged. A considerable quantity of serum albumin with hyaline casts or cylindroids, indicates an over-burdened kidney, but one whose epithelia are not dangerously damaged. Again, I repeat, rapidly fatal cases of toxemia may show neither casts nor albumin in the urine. Allen, while experimenting upon a series of cases concerning the value of the quantitative estimation of urea, found in two cases in the hospital at the same time and upon the same diet, that one was secreting 1.8 grms. in twenty-four hours, while the other was secreting 20 grms. in the same time. Number one had no symptoms of eclampsia; number two had eclampsia. As a rule, however, the urea will be diminished.

PATHOLOGY

Kidney.—Schmorl, 1893, reported seventy-three fatal cases which he himself examined, and found renal changes in 99 per cent of them. He lays great stress upon the fact that these changes are not of an inflammatory nature, but are degenerative. The epithelium of the convoluted tubules is the part affected. The protoplasm of these cells is found in various grades of degeneration,—cloudy swelling, fatty degeneration, and coagulation necrosis. With Winter, who asserts that the glomeruli are the chief elements affected. Schmorl strongly disagrees. Fibrinous thrombi are found in the glomerular capillaries, but never proliferation of capsular epithelium and exudation of leucocytes.

In many cases the renal changes are slight; even in severe cases the distribution of the changes is a patchy one, and healthy and necrotic tubules may be found lying side by side. The severe clinical symptoms cannot be dependent upon the renal changes. Schmorl has met with only one case in which the kidneys were quite healthy. In this case a most careful microscopic examination revealed nothing, but the other organs showed the usual changes.

Liver.—The liver in the gross is usually normal in size, reduced in consistence, while the surface and section present many minute hemorrhagic foci. Very rarely fatal hepatic toxemia with convulsions may fail to show prominent lesions of the liver; and, in fact, the liver after superficial examination may be pronounced normal. On careful microscopical examination, however, it reveals moderate diffuse granular and fatty degeneration, foci of intense degeneration with disorganization of the liver cells, and foci of partial necrosis in which the cells are distended with bile pigment. These lesions are very significant, as they belong to the process of autolysis of the liver cells, which is attended with profound alterations of the function of the organ.

In 1907, Konstantinowitsch published "the last word" upon the finer histological details of the eclamptic liver. The material used was the livers of thirty patients whose clinical history was accurately known. The liver changes fell into three main groups, which I will omit, merely giving his conclusions. The earliest change is a degeneration of the liver cells and endothelium of the capillaries at the periphery of the lobule. This is a progressive change. Thrombosis in the peripheral capillaries soon follows and, as a result, brings about dilation of the other parts of the capillaries and hemorrhages into the neighboring hepatic tissues. The next step of importance is necrosis of liver cells in the areas of thrombosis, and hemorrhages. By stasis of the circulation and a gradual deposition of fibrin, thrombosis of the interlobular vessels soon follows. This causes necrosis of large areas of liver cells and the formation of so-called anemic infarcts. The changes here are peculiar, not only in their nature, but in their distribution, which is different from that in any other liver condition. In other intoxications the changes are more confined to the central parts of the lobule. The invariable limitation of the early changes to the periphery of the lobules is peculiar to eclampsia.

Konstantinowitsch insists that there is no connection between the severity of the liver affection and the clinical severity of the case and the number of convulsions in eclampsia. Williams insists that in toxemic vomiting we always have a degeneration beginning about the central vein of the lobule and gradually extending toward the periphery.

Suprarenal Glands.—As yet there has been no extended observation made upon the effect of

normal pregnancy on the human suprarenal glands, but in animals there is found to be a hypertrophy of the cortex of which the zona fasciculata is the principal part affected, especially its outer zone (the zona spongiosa). The protoplasm of these cells becomes more reticulated, and the vacuoles become larger. In the zona reticulata there is excess of pigment and of granules in the cells. All these changes denote hyperactivity of the gland, and Guicysse considers that in pregnancy this hyperplasia and hyperactivity is necessary to neutralize toxic substances. Alqueir has found the same changes in the glands of two pregnant dogs. In twelve cases of eclampsia, four of pregnancy kidney, and one of retroplacental hemorrhage with albuminuria, Chirie found well-marked structural alterations affecting both the cortex and the medulla. Chirie does not consider that suprarenal changes represent any causative factor in eclampsia, but that they are rather the result of renal and other changes, and denote an increase in antitoxic and vasomotor functions.

Thyroid Gland.—Pottel & Kervilly, 1907, examined the thyroid gland in four fatal cases. In three they found somewhat complex changes, the chief of which were the presence of many young embryonic vesicles, cystic dilation of many vesicles, cirrhosis of the connective tissue, and increased fluidity of the colloid substance, which often contained small granules. These changes are similar to those found in colloid goiter or cystic adenoma. There is never any acute degeneration, such as is found in the liver and kidneys. In one case the gland was of normal histological structure. Changes similar to the above were found in three fatal cases of puerperal sepsis. They conclude that changes in the thyroid gland are not always present in eclampsia, and that, if they are, they are not typical.

Brain.—Various statements have been made concerning the pathological findings in the brain, edema, hyperemia, thrombosis, and apoplexy being described as the main lesions. Prutz noted edema in 42 per cent, hyperemia in 35 per cent and apoplexy in 13 per cent, while the brain was apparently normal in 10 per cent. Schmoll, in fifty-eight of sixty-five autopsies, noted the presence of thrombi in the smaller cerebral vessels and regarded them as the cause of the small areas of necrosis, which are so often observed. As an illustration of the severe apoplexy I have extracted the brain-findings from four cases reported by J. E. Welch, pathologist to the New York Lying-in Hospital.

CASE 3.—Diagnosis, eclampsia.

Brain: All the ventricles are filled with blood which comes from a laceration in the lower part of the pons and through the floor of the upper half of the medulla.

CASE 4.—Eclampsia.

All ventricles are filled with blood which comes from a laceration in the left corpus striatum.

CASE 9.—Toxemia of pregnancy.

The ventricles are all filled with fluid and clotted blood. The hemorrhage comes from a superficial laceration in the floor of the left lateral ventricle between the caudate nucleus and the optic thalamus.

CASE 2.—Toxemia of pregnancy.

All the ventricles are filled with fluid blood ruptured through the floor of the upper half of the fourth ventricle.

The diagnosis of eclampsia was made in Cases 3 and 4 because of the convulsions before death, and toxemia of pregnancy in Cases 9 and 11 because of the absence of convulsions, yet the lesions in the brain and livers are very similar.

Some of Welch's conclusions are so interesting that I shall take the liberty of including them here, though perhaps out of place. He says:

The headaches are due to intracranial disturbances. The duramater receives a nerve supply from the fifth cranial pair and is sensitive to cerebral changes, especially those that produce pressure. We have in these cases congestion, edema and hemorrhage, which could act as irritants to the duramater and produce the headache.

The visual disturbances, such as spots before the eyes, cloudy vision, and complete blindness, are due to circulatory disturbances and edema about the base of the brain. The ophthalmoscope shows a pallor of the optic nerve, but, as a rule, no lesion even in the patients who have complete blindness and recover.

The nausea and vomiting may be due to one of a combination of causes, which may be central or peripheral. The vomiting center may be impressed by poisonous substances circulating in the blood, or it may be due to the uterine enlargement, bowel disturbance or to the irritation of the gastric mucosa by elimination of poisonous substances into the stomach.

The petechiæ in the skin are produced by small hemorrhages from small vessels in which thrombi have been destroyed by autolysis. Heightened blood-pressure increases the extent of the hemorrhages.

Heart.—Besides cloudy swelling and fatty degeneration of the muscle fibres, areas of necrosis and interstitial hemorrhages are found in about 60 per cent of cases. Less constant than the above are necrosis of cells and thrombosis of capillaries in the intestinal tract, pancreas, adrenals, and muscles. A widespread thrombosis of capillaries is a constant feature of fatal cases of eclampsia.

Placenta.—In the toxemia of pregnancy the placenta is the seat of many changes which are met with to a lesser degree in normal placentas. They consist of various forms of infarct and

edema, but in the severe forms we have hemorrhages of varying degree and changes in the plasmodium of the villi. The hemorrhages are due to dilation of the vessels of the villi. If the hemorrhage is slight a hemorrhagic nodule is formed; if severe a diffuse parenchymatous hemorrhage results. In 1908 Brindeau and Nattan-Larrier examined twenty-one eclamptic placentas and were much struck by finding a nodular hypertrophy of the syncytium. This hypertrophy is not even, but is associated with atrophy in other parts. The authors consider that these changes are merely an exaggeration of the physiological condition, due to the action of the poison (at present unknown) of the toxemia of pregnancy.

To summarize our pathological findings, then, we find that the principal changes that are found constantly in the body and which are met with in no other disease, are—

1. A well-marked series of changes, culminating in necrosis in the cells of various organs, especially in the liver and kidneys.

2. A profound disturbance of metabolism evinced by—

- (a) The presence in the blood and urine of abnormal end-products of protein;

- (b) Altered ammonia co-efficient in the urinary nitrogen;

- (c) The presence of abnormal end-products of protein in the organs of the body;

- (d) A high percentage of undetermined nitrogen in the urine.

3. A profound blood change consisting in—

- (a) Almost universal capillary thrombosis;

- (b) Increased coagulability;

- (c) Diminished alkalinity;

- (d) Increased amount of fibrinogen;

- (e) Evidences of destruction of red corpuscles;

- (f) Leucocytosis;

- (g) Fatty degeneration in the leucocytes.

Most of the facts speak against the idea that one poison is responsible for the anatomical and chemical changes above enumerated. It is a mistake, for instance, to speak of "the eclamptic toxin," for there are many. There are not only the poisonous substances that initiate the tissue changes, but also the toxic substances that accumulate because of the disorganization of the liver and kidney cells. The most outstanding feature of the picture is, that the body is saturated with the end-products of protein.

The finding of abnormal organic and inor-

ganic fatty acids in the liver and urine, of lactic acid in the blood, urine and cerebrospinal fluid, the large proportion of undetermined nitrogen in the urine, and the high proportion of ammonia-nitrogen in the urine, is absolute evidence of a profound disturbance of metabolism.

Hofbauer looks upon autolytic changes in the cells of the body, and especially of the liver, as playing a prominent part in eclampsia. In the liver the chief anatomical change is the severe cell-degeneration. The chief chemical one is the presence of abnormal amino-acids, which represent the final phase of protein-disintegration, such as would be produced by autolysis. The earliest changes in the eclamptic liver are cloudy swelling of the liver cells and endothelium of the capillaries at the periphery of the lobule.

Can the chemical and anatomical changes be correlated? They can. When autolysis occurs in a cell its protoplasm undergoes a series of degenerative changes. The earliest is cloudy swelling, a more severe one is fatty degeneration, and, finally, the cell structure is destroyed, and it passes into a state of necrosis. The end-products of liver-autolysis have been thoroughly worked out by Jacoby and others, who found leucin, tyrosin, alanin, asparaginic acid, glycocoll, pierin basis, and fatty acids, especially lactic and formic acids. Hofbauer has found the same in the livers of eclamptic patients very soon after death, and others have demonstrated several in the blood and urine. There is therefore ample justification for asserting that in eclampsia, autolysis of liver cells occurs during life. Though especial emphasis has been laid on the liver, there is no doubt that similar changes occur in the cells of the other organs,—kidneys, heart, etc. Autolysis will naturally occur in organs where ferments are most powerful and numerous.

If in eclampsia autolytic ferments are more active, what activates them? It has been shown that the autolytic ferments of an organ are raised in activity principally by the addition of ferments from another organ (Jacoby), when the globulin of the blood is increased (Baer & Loeb), and if acids and other toxic products are allowed to act spontaneously. The result of autolysis of the cells of the liver and other organs, is the passage into the system of large quantities of toxic substances, products of protein-disintegration, which have already been enumerated. Further sources of intoxication are—

1. The original promoter of the change

which, as we shall see later, is ferments from the placenta.

2. The disturbance in function of such an organ as the liver, prevents, in a great measure, the formation of urea.

3. The amino-acids and other substances not converted into urea, further activate the autolytic ferments, thus making a vicious autolytic circle.

The remaining outstanding feature of eclampsia is the extensive intravascular coagulation. Schmorl originally held that thrombosis was primary and cell-degeneration secondary, but later changed his views and concluded that eclampsia was an intoxication with substances, probably placenta cells, which produced coagulation of the blood. The most probable explanation of the thrombosis and other blood-changes in eclampsia is the gradual passage into the circulation of products of protein disintegration.

Dienst, in 1905, advanced the theory that in eclampsia there is a passage of fetal blood into the maternal circulation, and that this fetal blood, behaving like the blood of another species, causes the production of various antibodies in the maternal blood. These are toxic and act chiefly in causing coagulation in the maternal capillaries.

Hitschmann, in 1904, recorded the first case of eclampsia in association with vesicular mole and absence of a fetus. Since then at least five other cases of eclampsia with vesicular mole have been described. In consequence of these facts, Dienst, in 1908, modified his views, though he still looks on fibrinogen as the real cause. He now assigns the increased fibrinogen of the blood to the breaking down of white corpuscles, which are much increased in eclampsia and which he thinks are destroyed in the placenta.

Zweifil ascribes the high percentage of ammonia in the urine to lactic acid, which he regards as the cause of eclampsia; but as lactic acid has been found in the blood of epileptics in far greater proportion than Zweifil ever found it, and as it is further found in a large list of other affections, his views have not prevailed. It is better to regard lactic acid as one of the many disintegration products of protein, and hence it is an effect, rather than a cause, of eclampsia. The evidence seems to prove that in eclampsia the high ammonia co-efficient is much more due to an increased formation of amino-acids than to a defective urea-forming function of the liver or to starvation and vomiting.

Ferments of the Placenta.—The placenta, in the number and power of the ferments it contains, is second to no other organ of the body, not even excepting the liver and pancreas. There is no proof of any connection between these ferments and fetal metabolism. However, if the placenta is to be looked upon purely as an organ through which osmotic interchange takes place between the mother and the fetus, the reason for its complicated chemical and biological structure is not apparent. From 1901 to 1907 much work has been done upon the autolytic power of the placenta to break down complex nitrogenous substances. It has been shown that the normal placenta after death takes place is subject to autolysis, also that autolysis occurs during life in the eclamptic placenta.

Dryfuss, in expressing his opinion, says that so far there is no definite proof of the placental origin of eclampsia, but that all that has been done so far is to bring to light certain facts which have an important bearing on its etiology. Hofbauer, on the other hand, writes: "The symptom-complex of eclampsia is initiated by a ferment intoxication of placental origin." This is the latest phase of the placental theory of eclampsia. It has been pointed out that the autolytic ferments of an organ are activated by the presence of ferments and autolytic products from another organ. It is conceivable, therefore, that the presence in the blood of ferments and autolytic products from the placenta, rouses into activity the dormant ferments of the liver and other organs, and the result is autolysis of other cells and a still further absorption into the circulation of autolytic products, and so on. The coagulation of the blood in the capillaries and the consequent impaired nutrition of cells, favor the destructive process. As far as it is possible to draw conclusions, the following are suggested:

1. There is no special eclamptic toxin.
2. Chemical discoveries have shown that eclampsia is an auto-intoxication in which a profound disturbance of protein metabolism plays the chief part, the nature of which now rests upon a firm basis.
3. The chief toxic substances are the products of the disintegration of protein.
4. In eclampsia intra-cellular ferments, especially proteolytic, are raised in activity throughout the body, causing autolysis of the cells and production of the above toxic substances.

5. The primary cause of eclampsia is to be sought in the placenta.

6. As regards the connection of the placenta with eclampsia:

(a) The specific placental theory of Veit must be considered dead. The various specific placental reactions, whether produced naturally or experimentally in animals, do not exist.

(b) Placental extracts possess no toxicity for animals, beyond causing coagulation of the blood and death from extensive thrombosis.

(c) The eclamptic placenta has no specific toxicity.

(d) The intracellular ferments of the placenta are increased in activity in eclampsia. In the light of present knowledge, the most probable theory of the cause of eclampsia is an intoxication of the body by the passage of ferments and autolytic products from the placenta into the circulation, the principal effect of which is increased coagulability of the blood and the activation of autolytic ferments in the other parts of the body.

Treatment.—The treatment of the milder cases of toxemia is as follows:

The patient should be placed upon a diet of milk, fruit, and bread, and, in addition, may have fresh fish and green vegetables. Water is of the greatest value. The quantity of salines allowed depends on the pulse-tension and the tendency to edema, whether pulmonary or cutaneous. It is questionable whether we should attempt to stimulate an already over-worked liver by the administration of calomel, although some authorities advise it. Saline laxatives in intestinal toxemia tend to dissolve fecal matter and produce fresh absorption. Cascara is usually disappointing. Compound licorice powder is our best laxative. Many are advising the use of continuous salines by Murphy's method, but Ewing has demonstrated, post-mortem, colons widely distended with fluid following this procedure from which there has apparently been no absorption.

The persistent use of oxygen should be encouraged in cases of cyanosis, thereby oxidizing the incompletely metamorphosed products of albumin, namely, lactic acid. In thyroid toxemias one-grain doses of thyroid extract, given three times daily, is most beneficial. For the acidosis soda bicarb., gr. xv, t. i. d., may be beneficial.

Williams has advocated very strongly the importance of the ammonia coefficient in the vomiting of pregnancy and advocates this as an indication for operative interference, but two

workers from Chittendon's laboratory have recently demonstrated the fallacy of depending upon this.

The determination of the nitrogen partition is unquestionably of value, but an impossible procedure for the average practitioner. Profuse sweating should be abandoned. It appears that the toxins of eclampsia are of such gross molecular constitution as to render excretion through the skin difficult or impossible. It has been shown that profuse perspiration will cause a concentration of toxic blood in the body, and make the condition worse. Zweifel recommends the removal of 300 to 500 c. c. of blood from the arm, and he then injects, intravenously, 500 to 1500 c. c. of saline solution, thereby diluting the remaining toxins. The salines should not be injected if there is edema.

The danger of chloroform poisoning and its effects upon the severe liver lesions, has been so deeply impressed that we are no longer justified in using it in these conditions. Chloral and scopolamin for the same reasons should not be used. Morphine has been very highly recommended, but it is extremely dangerous to the fetus, besides checking elimination. Pilocarpin is a strong nerve-poison and should not be used, and nitroglycerine is of doubtful value. Every eclamptic woman should be delivered as soon after the attack as possible, and we should deliver every case of pernicious vomiting as soon as we are convinced that it is a case of pernicious vomiting. If relief does not follow delivery promptly we should decapsulate or, at least, split the kidney capsules.

CORRESPONDENCE

THE PROGRAM COMMITTEE

Minneapolis, Oct. 10, 1911.

TO THE EDITOR:

I notice in your last issue that again, as has happened so frequently in the past, a brother's heart has gone out in sympathy to the country member by reason of the fact that he has not had adequate representation on the program of the State meeting. Having been a country member and a fairly regular attendant for many years upon the meetings of the State Association, I feel that I am competent to voice the sentiments of a majority of the country members. The country man goes to the State meeting for three principal purposes: first, for attendance upon the scientific sessions, thereby getting into closer touch with the advances in medical science during the year; second, for the relaxation, rest, and change, and to see the big city; and, third, but not least, being a sociable animal he enjoys the opportunity afforded to meet those of his species, to renew old acquaintances, to make new ones, and he has an opportunity to rub elbows with the really big men of the profession.

The country man's work is much of it far from his office, making close observation of his cases impossible. Out of his multiplicity of cases he has but few of one kind, has no laboratory at hand to complete and verify his findings, and is proverbially a poor case-record keeper. With these handicaps he is naturally unable to furnish

his brethren with the quality of mental pabulum that they attend the meetings to receive.

We have our county societies where things, both great and small, may be threshed out, and where all have ample opportunity to do all the work that they wish to do. The reports from most county societies do not seem to indicate that there is any great clamor for an opportunity to do something.

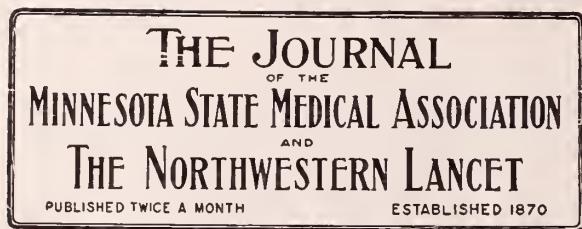
Every man has at times something of interest. In the case of a few country men who have the instincts and energy of the research man, and take the time to gratify them, modesty should not prevent them from communicating with the committee, who will gladly give them a fair share of the time.

In justice to our present and our past program committees, I wish to say that invitations to country members to take part have been frequent and urgent, much more frequent than would be expected, comparing the Association's membership with the few that are required to fill a program.

The secret is out! The country member does not want to take part, nor does he want to hear his country brother's effort along lines that belong to specialists.

The time devoted to our meetings is all too short. In order to make the most of it our committees should not give the time to men who love the sound of their own voices, but should select the new things along most practical lines and have them presented by the man who is best fitted to do so. That man is not often the country doctor.

C. L. SCOFIELD, M. D.



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SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

OCTOBER 15, 1911

THE MINNESOTA STATE MEDICAL ASSOCIATION MEETING

The program committee are to be congratulated on the excellence of their program for the meeting of the State Association in St. Paul on October 5 and 6.

The attendance was in excess of the meeting last year, and nearly 375 members were present and registered, a very large number of them from the country. The country members turned out better than usual, and they contributed to the interest in the program.

The place of meeting, Hotel St. Paul, was a happy one in spite of the overcrowding in one of the smaller rooms. The large room was not in constant use, as there was some complaint of the acoustics, but, as a matter of fact, the fault was in the speaker rather than in the room. The man who spoke distinctly and in a sufficiently loud voice was heard all over the room, but the man who spoke rapidly or read from manuscript was heard indifferently.

As usual, the smoking doctor was very much in evidence, and at times the air in the smaller room was vitiated beyond endurance. It would seem wise to request the smoker to omit his usual practice while the State Association is in session.

Dr. Sayre charmed his audience by his able oration in surgery, and the majority of his hear-

ers confessed with pleasure that they had learned much that was original and new. The paper will appear in an early issue of this journal.

Dr. Sippy presented his subject, that of gastric and duodenal ulcers, in a very interesting manner to both general practitioner and surgeon. Each was satisfied that Dr. Sippy was on his side, although it was made very plain that, under careful management, gastric ulcer is an easily medically curable disorder.

The symposium offered by the Rochester clinicians on carcinoma of the alimentary tract, was ably presented and discussed.

Visceroptosis, in a paper by Dr. Crummer of Omaha, brought out an active discussion that was vigorously defended by the essayist, a man of ready tongue and convincing speech.

"Fractures and the X-Ray in Fractures" gave the surgeons another opportunity to express their individual views.

A symposium on syphilis was of unusual interest, as were the surgical topics presented by the specialists in eye and ear work.

The internists did not have an equal number of papers with the surgeons, but all that were read were good.

"The University Hospital" was Dr. C. L. Greene's subject, and he was reinforced by Drs. Beard and Westbrook. It gave the audience an opportunity to hear of the work done by the State hospital under the direction of the faculty of the medical school of the University.

In spite of the humorous paper by Dr. Christian Johnson, of Willmar, the standards of education and the unity of the medical profession in the state will continue to be cemented in a firm bond. There should be no sectional feeling anywhere, and the profession of medicine will be united in one common field for the good of the state.

The House of Delegates amended the articles in the constitution and by-laws, making December 31st the end of the calendar and fiscal year, in order to conform to the requests of the A. M. A. This is an economical measure, and although it may cause some embarrassment for the adjustment of fees by the local secretaries in county and district societies, the ultimate end will be order and economy.

The address of the president, Dr. J. W. Robertson, of Litchfield, contained many valuable suggestions, notably that for the establishment of district health officers and school inspectors. His suggestions were an improvement over the

bill introduced in the last legislature on this subject, and it is hoped that medical men all over the state will make every effort to see that such a law is introduced in the next legislature. To accomplish this, much individual work by physicians with our representatives is necessary.

The officers elected for the coming year were Dr. Haldor Snévé, of St. Paul, president; Dr. O. Th. Sherping, of Fergus Falls, and Dr. W. F. Wilson, of Lake City, first and second vice-presidents respectively; Dr. R. J. Hill, of Minneapolis, treasurer; Dr. Thos. McDavitt, of St. Paul, secretary; Dr. Geo. D. Head, of Minneapolis, and Dr. R. C. Dugan, of Eyota, delegates to the A. M. A.; and Dr. M. P. Vander Horck, Minneapolis, and Dr. Thos. McDavitt, alternates.

The meeting-place next year will be Duluth, and the date of meeting the first week in October.

FOOD FOR DIABETICS

The relief obtained by proper feeding for diabetics has been a subject for serious consideration for years. The earlier writers urged the elimination of all sweets and starches to a degree that became dangerous to the patient. Latterly, a school of experimentors advised a more liberal dietary and suggested that a diminution of the quantity of starches and sweets, supplemented by a moderate amount of proteids, is necessary to maintain the strength of the individual.

Recent communications, particularly from Germany, show that a plan was formulated whereby the food supply was governed by the amount of sugar in the urine. This led to the weighing of food stuff and feeding an amount based upon the number of calories necessary for each individual.

The pendulum is still swinging, and now the patient is urged to eat starches in some form.

Magnus-Levy, in the July 3d issue of the *Berliner Klinische Wochenschrift*, advises an oatmeal diet in the moderately severe or severe cases, and says the advantage of oatmeal in the diet of diabetics is mostly on the negative side, that is by the absence of meat. Oatmeal is favored over other cereals on account of its be-

havior in the intestines. With von Noorden, he cautions the therapist to begin a preliminary diet in which less than 50 gm. of bread is allowed. When the oatmeal porridge was begun in the cases he cites it was found that the patient acquired a certain tolerance and was able to take a larger amount of bread without glycosuria. Before the oatmeal was given, the patient eliminated from 50 to 70 gm. of sugar and a large amount of acetone. It is preferable to give the oatmeal for three or four days, then a vegetable day, and then, after a pause of a few days, the oatmeal is resumed again as before. The urine should be carefully watched, and in certain cases rye or wheat meal may be substituted for oatmeal.

Minkowski, in the *Medizinische Klinik* for July 2d, corroborates Magnus-Levy's views and states that patients with impending, or already installed, coma have been dragged from the jaws of death by the oatmeal cure.

This author fears that this new cure may be overdone by swaying sentiments, and he cautions his students to study their cases carefully before adopting too stringent measures. The benefits from oatmeal are due to the restriction of proteids and fats, and they reduce the metabolism as a whole. If carefully guarded, however, the cure is an advantage. Funck, in the *Deutsche Medizinische Wochenschrift*, finds that a co-operating factor lies in a disorder of the gastro-intestinal tract. Instead of devoting all of our energies to curing the disturbance in the metabolism of carbohydrates Funck suggests that the disturbance may be in the fixation, as well as in the oxidation, of carbohydrates, and that an unsuspected chronic gastritis or gastrogenous enteritis may be the primal factor, or, at least, may be responsible for exacerbations in diabetes.

In a severe case Funck introduced a fine sound into the duodenum and flushed the intestines for thirty-eight hours with nine liters of physiologic salt solution at the rate of a drop a second. He then gave milk four days, and then milk and rice with hydrochloric acid as the only drug.

The use of well-baked potatoes in generous amounts is advocated by the writers. Exercise should be limited in all cases.

NEWS ITEMS

Dr. J. C. Lannin, of Caledonia, has moved to Mabel.

Dr. C. H. Durkee has moved from Shields, N. D., to Fairmont, N. D.

Aberdeen, S. D., has engaged the visiting nurse for her public schools.

Dr. J. L. Shellman, of Nashwauk, has gone to Chicago for post-graduate work.

Dr. H. V. Magnusson, of Aitkin, has decided to move to California on account of the ill health of his wife.

Dr. Robert O. Earl, of St. Paul, has returned from Europe, where he has been for several months in post-graduate work.

Dr. W. H. Smith, formerly government physician at Cass Lake, has returned to that place to take up general practice.

Dr. R. E. Weible, of Fargo, N. D., has been doing post-graduate work in Chicago in the clinics of Dr. John B. Murphy.

Dr. C. W. Maynard, of the More Hospital staff at Eveleth, was married last month to Miss Mabel Haskins, of Sioux City, Iowa.

Dr. Geo. W. Wood, of Faribault, has been appointed by Gov. Eberhart as trustee of the State School for the Deaf and Dumb.

Dr. A. S. Nelson, who has served as interne at the Bethesda Hospital of St. Paul for a year and a half, has begun practice at Bagley.

Dr. C. M. Johnson, an interne of St. Barnabas Hospital, Minneapolis, has located in Montevideo and formed a partnership with Dr. C. E. Rogers, of that place.

Dr. J. G. Hodgkinson, of South St. Paul, died last month at the age of 66 years. He had practiced in the state nearly thirty years, sixteen of them in South St. Paul.

Dr. V. I. Miller, formerly of Westbrook, has located at Mankato. Dr. Miller has been in Chicago for a year taking a special course in eye, ear, nose, and throat work.

To protect the patients from the street noises, St. Luke's Hospital of St. Paul, has erected signs at the nearby street-corners to warn teamsters. The sign bears the label "hospital street," and is authorized by the city council.

Dr. Frederick E. Leavitt, of St. Paul, delivered a paper before the Interurban Academy of Medicine at Duluth last month. His subject

was "Common Mistakes in Obstetrics." We shall publish the paper later.

Drs. W. H. Rowe, of St. James; E. H. Whitcomb, of St. Paul; Thomas C. Clark, of Stillwater; J. H. Dorsey, of Glenwood; and W. D. Kelly, of St. Paul, attended the convention of army and navy surgeons, held at Milwaukee last month.

Dr. S. S. Kilvington, of Minnetonka Mills, died last month at the age of 63. Dr. Kilvington came to Minneapolis soon after the Civil War, and was health officer of the city for a number of years. He was a 33d degree Scottish Rite Mason.

The N. P. Beneficial Association decided, at its annual meeting in St. Paul last month, to build an additional hospital at Glendive, Mont. The Association now has hospitals at Brainerd, Missoula, and Tacoma. The new hospital building will cost \$60,000.

Dr. Frank C. Todd, of Minneapolis, has returned from Europe. Dr. Todd went to Berlin to attend the International Congress of Rhinologists and Laryngologists as a delegate from the University of Minnesota. He also spent some time in the clinics of Vienna.

Dr. Uriah D. Thomas, of Minneapolis, died last month at the age of 83 years. Dr. Thomas had practiced in Minneapolis over a third of a century. Dr. Thomas was a voluminous writer of verse, and was highly respected by the members of the Authors' Club of Minneapolis.

Dr. A. M. Fisher, of Bismarek, N. D., has returned from Vienna, where he has been studying. While in Europe Dr. Fisher attended the International Hygienic Institute at Dresden.

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DEATHS REPORTED TO THE STATE BOARD OF HEALTH OF MINNESOTA FOR THE MONTH OF JULY, 1911

REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyneuritis	Typhoid Fever	Diarrheal Dis- eases of Children	Cancer	Puerperal Septicemia
Ada	1,253	1,432	1		1											
Albert Lea	4,500	6,192	3	2												
Alexandria	2,681	3,001	3											1		
Anoka	3,769	3,972	4	1												
Austin	5,474	6,960	4													
Barnesville	1,326	1,353	1												1	
Bemidji	2,183	5,099	1													
Benson	1,525	1,677	1													
Blue Earth	2,900	2,319	0													
Brainerd	7,524	8,526	10			1							2			
Brockenridge	1,282	1,840	2											1		
Canby	1,100	1,528	2													
Cannon Falls	1,239	1,385	0													
Chaska	2,165	2,050	*													
Chatfield	1,426	1,226	0													
Cloquet	3,074	7,031	7				2									
Crookston	5,359	7,559	4	2												
Detroit	2,060	2,807	2	1												
Duluth	52,968	78,466	64	12	1	4	1				1			3	3	1
East Grand Forks	2,077	2,533	1													
Ely	3,572	3,572	4	1	1	1										
Eveleth	2,752	7,036	9	1										4		
Faribault	7,868	9,001	2												1	
Fairmont	3,440	2,958	2	1												
Fergus Falls	6,072	6,887	6		1	1										
Glencoe	1,788	1,788	1													
Granite Falls	1,454	1,454	1													
Hastings	3,811	3,983	3													
Hutchinson	2,495	2,368	1													
International Falls		1,487	7		1						1					
Jordan	1,270	1,151	0													
Lake City	3,142	3,142	2													
Litchfield	2,280	2,333	1												1	
Little Falls	5,774	6,078	3													
Luverne	2,223	2,540	2													
Le Sueur	1,937	1,755	3												1	
Madison	1,336	1,811	3								1					
Mankato	10,559	10,365	7			1									1	
Marshall	2,088	2,152	2													
Melrose	2,591	2,591	3	1										1	1	
Minneapolis	202,718	301,408	256	25	6	13	3	2	1		3	1		32	22	2
Montgomery	979	1,267	0													
Montevideo	2,146	3,056	1													
Moorhead	3,730	4,840	4													
Morris	1,934	1,685	1													
New Prague	1,228	1,554	1		1											
New Ulm	5,403	5,648	6	1												
Northfield	3,210	3,215	3												1	
Ortonville	1,247	1,774	2													
Owatonna	5,561	5,658	5												1	
Pipestone	2,536	2,475	1													
Red Lake Falls	1,666	1,666	1													
Red Wing	7,525	9,048	8	1							1					
Redwood Falls	1,661	1,666	3											1		
Renville	1,075	1,182	0													
Rochester	6,843	7,844	23	1	1										5	
Rushford	1,100	1,011	0													
St. Charles	1,304	1,159	1													
St. Cloud	8,663	10,600	4	1										1		
St. James	2,102	2,102	1								1					
St. Paul	163,632	214,744	195	23	4	11	8				7		1	11	15	1
St. Peter	4,302	4,176	2	1												
Sauk Centre	2,154	2,154	0													
Shakopee	2,046	2,302	0													
Sleepy Eye	2,046	2,247	1													
South St. Paul	2,322	4,510	2													1
Staples	1,504	2,558	1											1		
Stillwater	12,318	10,198	11								2		1		1	1
Thief River Falls	1,819	3,174	4		1											
Tower	1,111	1,111	*													
Tracy	1,911	1,826	1													
Two Harbors	3,278	4,990	3											1		
Virginia	2,962	10,473	15								1	1		4		
Wabasha	2,622	2,622	2		1											
Warren	1,276	1,613	1	1												
Waseca	3,103	3,054	2													
Waterville	1,260	1,273	1												1	
West St. Paul	1,830	2,660	3												1	
Willmar	3,409	4,135	3													
Winona	19,714	18,583	17	3		1					1				2	
Winthrop	813	1,043	2			1										
Worthington	2,386	2,385	5										1		1	

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

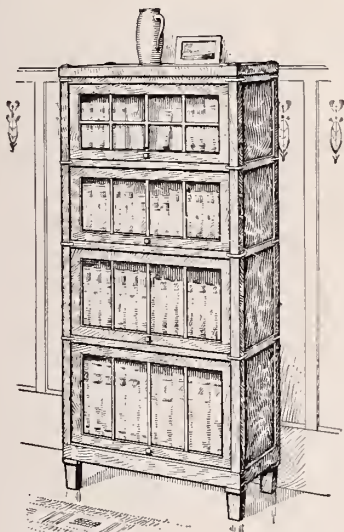
VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	0													
Aitkin	1,719	1,638	1													
Akeley			1													
Appleton	1,184	1,221	0													
Belle Plaine	1,121	1,204	0													
Biwabik		1,690	3													
Bovey		1,377	1													
Browns Valley	721	1,058	0													
Buffalo	1,040	1,227	0													
Caledonia	1,175	1,372	0													
Cass Lake	546	2,011	2													
Chisholm		7,684	6	2		1								1		
Coleraine		1,613	2	1												
Dawson	962	1,318	1													
Delano	967	1,031	0													
Farmington	733	1,024	2		1											
Fosston	864	1,055	1													
Frazee	1,000	1,645	3													
Glenwood	1,116	2,161	1													
Grand Rapids	1,428	2,239	1													
Hibbing	2,481	8,832	16		1	1										
Jackson	1,756	1,907	1		1											
Janesville	1,254	1,173	0		1											
Kenyon	1,202	1,237	2													
Lake Crystal	1,215	1,038	1													
Long Prairie	1,385	1,250	0													
Madelia	1,272	1,273	0													
Milaca	1,204	1,102	0													
Mountain Lake	959	1,081	2			1										
Nashwauk		2,080	1													
North Mankato	939	1,279	1													
North St. Paul	1,110	1,404	0													
Osakis	917	1,013	1			1										
Park Rapids	1,313	1,850	1		1											
Pelican Rapids	1,033	1,019	0													
Perham	1,182	1,376	4	1												
Pine City	993	1,258	2													
Plainview	1,038	1,175	3													
Preston	1,278	1,193	0													
Princeton	1,319	1,555	2			1										
St. Louis Park	1,325	1,743	0													
Sandstone	1,189	1,818	3													
Sauk Rapids	1,391	1,745	0													
South Stillwater	1,422	1,343	3				1									
Springfield	1,511	1,482	0													
Spring Valley	1,770	1,817	2	2												
Wadena	1,520	1,820	2													
Wells	2,017	1,755	4													
West Minneapolis	2,250	3,022	2	1												
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	0													
Windom	1,944	1,749	3													
Winnebago City	1,816	2,555	0													
Zumbrota	1,119	1,138	0													
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			9	1												
Rochester, Hospital for Insane			8	2												
St. Peter, Hospital for Insane			9	1												
Anoka, Asylum			3	1												
Hastings, Asylum			2													
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			8	2		1										
Owatonna, School for Dependents																
Stillwater, State Prison			1	1												
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			9													
OTHER PARTS OF STATE			636	63	11	11	7	1	2	....	5	2	7	33	52	3
Total for state			1529	157	34	51	22	3	3	....	22	8	17	108	117	11

*No report received. Registrar not doing his duty.

195 stillbirths and premature births not included in above totals.

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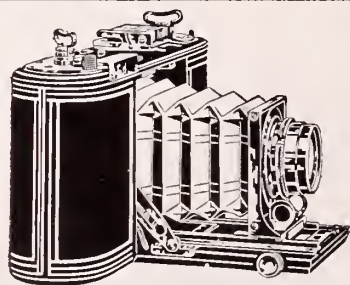
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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, NOVEMBER 1, 1911

No. 21

SPOROTRICHOSIS IN NORTH DAKOTA: REPORT OF A CASE

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and

H. W. MILLER, M. D., JAMESTOWN, N. D.

(From the State Public Health Laboratories, University of North Dakota, Grand Forks, and the State Hospital for the Insane, Jamestown, N. D.)

[Note.—This paper was read before the North Dakota Association in May, and repeated, with some additional matter, before the Minnesota Association in October. We give the discussion which followed each presentation of the paper.—The Editor.]

Sporotrichosis is generally believed to be a rare infection, owing to the fact that only about twenty cases have been reported in the literature of America. Recent studies indicate, however, that this infection is not as rare as we have supposed, but it seems that the cases have not been recognized and have been incorrectly diagnosed. This conclusion is based upon the fact that Dr. R. L. Sutton¹, of Kansas City, who has been on the lookout for these cases, has recorded five new cases within a year; Dr. J. M. Sutton², of Halstead, Kansas, has just reported four new cases and we are informed that he has recently had under observation four additional cases. Drs. Harker³, Beam⁴, Stewart⁵, and Henderson have each reported new cases from different parts of Kansas, within the last six months.

We are convinced that this disease is more common in North Dakota and Minnesota than is indicated by the reported cases, and it is chiefly for this reason that we wish to bring the subject before this Association. The case reported last year by Drs. Hyde and Davis⁶, of Chicago, came from Braddock, North Dakota, and the case just reported by Drs. Bevan and Hamburger⁷ came from South Dakota. Our case was observed at Jamestown, and one of us

(R.) has just recently isolated this organism from a case in the care of Dr. Quain, of Bismarck. In addition to these four cases, we wish to call attention to six peculiar infections of the lymphatics of the arm which were reported in the *St. Paul Medical Journal*⁸ by Dr. E. P. Quain in 1904. Drs. Quain and Ramstad, of Bismarck, have seen three or four cases of this nature since then and have thought that they were dealing with a tuberculous infection of the lymphatics, probably of bovine origin. The descriptions of their cases show clearly that these were cases of sporotrichosis.

The first case of sporotrichosis that has been reported is that of Schenck⁹, which was observed at the Johns Hopkins Hospital in 1896. The infection occurred on the right index finger of a man 36 years of age. Three months previous to being seen by Dr. Schenck the patient had scratched the finger on a nail, which resulted in the formation of a small abscess at the site of the injury. About three weeks after the injury an ulcer appeared between the second and third metacarpophalangeal joints. The inflammation traveled up the arm, and in about seven weeks seven similar abscesses had formed in the lymph-channels on the radial side of the arm. When opened, a watery, gelatinous or puriform material escaped. A fungus, which was provisionally classed among the sporotricha, was isolated from the abscesses in pure culture.

The second case that was positively diagnosed by means of cultures is that of Hektoen and Perkins¹⁰. In this case, which occurred in a boy five years of age, the infection took place in an abrasion on the index finger, caused by a blow from a hammer. Ten days after the injury the finger was greatly swollen and at the site of the injury was found a deep, well-defined, undermined ulcer. The lymph-vessels on the dorsal surface of the hand and on the extensor surface of the forearm were swollen and presented about twenty nodules ranging in size from that of a small pea to that of a hazel-nut. These nodules began to break down and suppurate (Fig. 1) about two weeks later and discharged



Fig. 1. Sporotrichosis of the finger and forearm. Case of Drs. Hektoen and Perkins.

a brownish, thick, gelatinous material. The cultures made by Hektoen gave a fungus which proved to be identical with that isolated by Schenck from his case. Hektoen proposed to name this organism *sporothrix schenckii*, and it is now generally known by that name.

Other cases have been reported in this country by Brayton¹¹, Burlew¹², Trimble and Shaw¹³, Stelwagon¹⁴, Pusey¹⁵, Hyde and Davis¹⁶. In Europe a number of cases have been reported from France by de Beurmann and Ramond, de Beurmann and Gougerot, Dor, Letulle, Massary, Doury and Monier-Vinard, Gaucher, Widal and Weill, Rubens-Duval and Fagelauby and Esmein, Demoulin, and others. One case has also been reported from Vienna by Kren and Schrammek, and five from Brazil by Lutz and Splendorie. The latter authors have also observed a spontaneous infection with this organism in rats.

A similar disease has been observed among horses and is generally known by the name of *epizootic lymphangitis*, *pseudo-farcy*, or *mycotic lymphangitis*. A few cases have been observed in North Dakota by Crewe, the state veterinarian (Fig. 2), and are reported in the 25th report of the Bureau of Animal Industry. The infecting fungus has been studied by Page, Frothingham and Paige¹⁷, of Harvard, and seems to be identical with *sporothrix schenckii*. According to R. L. Sutton and Hyde, it would seem

that the infection may be contracted by man from infected horses, but it does not seem that this is the common source of infection.

The following case was recently observed by us:

Patient.—A single man, farm laborer, aged 45, admitted to the North Dakota State Hospital for the Insane on October 26, 1910, suffering from an attack of manic-depressive insanity. He was well nourished, and a physical examination made shortly after admission showed nothing abnormal. Family and past history have no bearing on present illness.



Fig. 2. Mycotic lymphangitis (sporotrichosis) in North Dakota. From 25th report of the Bureau of Animal Industry.

Present illness.—On November 7th the patient complained of his finger being sore, and examination showed the middle finger of the left hand to be red and swollen, and there was a lymphangitis extending up the arm. From a small opening on the dorsal surface of the finger was a slight seropurulent discharge.

The finger was treated by incision and moist bichloride dressings, and in the course of a few days the inflammation subsided to a great extent, but the opening in the finger refused to heal.

On November 20th the patient complained of not feeling well and was found to have a temperature of 102.6° ; the tongue was heavily coated; and he had an obstinate constipation. He was now transferred to the hospital and put to bed, and an examination showed the finger to be very tender to pressure and considerably swollen. On the dorsal surface, between the first and second interphalangeal joints, was a small deep ulcer with thickened edges and discharging a thin purulent material. The temperature remained elevated for the next two days, and gradually declined, reached normal on the 24th, and remained so during the remainder of the course of this illness.

On November 28th, three weeks after attention was first called to the finger, there were noticed for the first time a number of hard

of the next few days new nodules continued to form until there were nineteen in all extending up the arm almost to the shoulder. (Fig. 3.) There was no enlargement at any time of the epitrochlear or axillary glands.

About two weeks after the first nodules appeared they began to soften, and the overlying skin assumed a purplish hue. On December 15th one of the broken-down nodules was opened and found to contain a dirty, mucilaginous, puriform material, resembling very closely the pus contained in the nodules occurring in a case of barber's itch.

Cover-slip preparations of this material stained with methylene-blue were negative. During the course of the next week all of the nodules had broken down and now appeared as violet-colored, fluctuating masses, sharply demarcated from the surrounding healthy skin.

On December 23d, under ether anesthesia, all of the abscesses were laid open, curetted, swabbed out with Harrington's solution followed by alcohol and packed with iodoform gauze. Several of the abscesses were found to be connected with each other subcutaneously.

After a few days all of the wounds began to show healthy granulations, and in the course of two weeks many of the wounds had healed over. Three other abscesses now appeared on other parts of the arm and were treated by incision and drainage. Some of the wounds, however, became very indolent and showed very little tendency to heal, and other abscesses had formed on different parts of the arm. By this time a clinical diagnosis of sporotrichosis had been made, and cultures sent to the Public Health Laboratory gave a growth of *sporothrix schenckii* in pure form. The patient was now put on potassium iodide, which in several reported cases had been used with beneficial results. The abscesses, three or four in number, which had recently appeared, were not treated surgically, but left as they were to ascertain what effect the potassium iodide would have on them. After a few days the wounds became clean and healthy looking, and from now on recovery was uneventful, the ulcerated areas healing over within the course of the next three weeks.

The abscesses which appeared late and were not treated by incision cleared up entirely under the influence of potassium iodide, leaving no trace whatever of their presence.

There was considerable edema of the hand



Fig. 3. Sporotrichosis of the lymphatics of the arm. Case of Drs. Ruediger and Miller.

nodules, which were arranged chain-like along the course of the still somewhat swollen lymph-channels, extending from the finger almost to the axilla. These nodules varied in size from 0.5 to 1.5 cm. in diameter and were elevated above the surface of the skin. They were painless and not tender to pressure and the overlying skin showed no changes.

The patient was now feeling perfectly well, had no pain in the arm, but complained at times of pain in the finger, which was extremely tender to pressure.

It was now thought that we possibly had to deal with a tuberculous lymphangitis, and the ulcer on the finger was curetted and the scrapings examined for tubercle bacilli, but with negative results.

The ophthalmotuberculin test tried at this time also proved to be negative. During the course

after cicatrization of the wounds set in, but this condition gradually cleared up.

It will be interesting now to turn to the description of the cases reported by Dr. Quain as cases of tuberculous lymphangitis. We find the following description of Case 1:

F. C., boy of 5 years of age. Four months ago, while playing in the barnyard, a slight bruise was sustained on the dorsum of the left thumb. The bruise became infected, and a small local abscess developed. The acute inflammatory symptoms subsided promptly after the pus was evacuated, but the ulcer refused to heal. After a month's treatment with home remedies, it was noticed that three or four small nodules were present under the skin in the forearm. From this time new tumors appeared higher and higher up the forearm and arm. Those in the forearm broke through the skin and discharged pus in the same sequence in which they first appeared. None of the ulcers produced had shown any tendency to heal. The tumors and ulcers had never been very painful, but were somewhat tender to touch.

Present state.—Over the dorsum of the first phalanx of the left thumb is situated an ulcer, one cm. in diameter. The skin edges are raised, but, on probing, found to be undermined, the space under the skin being filled with soft, cheesy masses. The granulations at the base of the ulcer are gray and anemic, and bleed but slightly when torn. Several small sinuses lead into cavities under the surrounding skin, and these are filled with necrotic masses. The skin around the ulcerating area shows a reddish, inflammatory margin.

On the outer and dorsal surface of the wrist lies another ulcer, considerably larger than the previous one. The edge of the skin is bluish in color and lies on a lower plane than the healthy skin, but is decidedly undermined. After cleaning out all necrotic and purulent material the ulceration is found to extend deeply between the extensor tendons of the thumb.

Neither of these ulcers is very tender to manipulation or probing. The skin between them seems normal.

On the outer surface of the forearm are two small ulcers, similar in appearance to the previous ones. These two are connected by a hard subcutaneous cord, over which the skin is inflamed, red and tender.

At the elbow this chain of infected areas passes across the anterior surface of the forearm to the internal surface of the arm. In front of the elbow and apparently over the median veins, is an area of discolored integument, one-half cm. in diameter, from the center of which serous pus discharges through a small sinus. With a probe this area is found to be a subcutaneous cavity filled with soft, cheesy material.

On the internal surface of the arm, just above the internal condyle of the humerus, we find a subcutaneous swelling, soft and fluctuating. This location corresponds with that of the cubital lymph-gland, and the tumor is evidently an enlargement and suppuration of this gland. In a straight line from this point to the center of the axilla are located four or five small subcutaneous nodules, each the size of a pea. They show some discoloration of the skin, and are hard and tender to touch.

This description gives a clear picture of a case of sporotrichosis.

Dr. Quain is now convinced that these were cases of sporotrichosis and states that he has treated at least ten cases in the last ten years. Figure 4 is a photograph of one of his cases,



Fig. 4. Sporotrichosis on the inner side of the leg and thigh. The lymphatics leading up from the ulcer and the nodules were painted with ichthyol to get a good photograph. Case of Dr. E. P. Quain.

obtained in August, 1911, and kindly loaned to us by him. This case was positively diagnosed by culture at the State Public Health Laboratory.

Symptomatology.—The infection usually starts from a slight injury and is characterized by the development of a chronic refractory ulcer and the formation of multiple secondary nodules in the lymph-channels leading from the site of the injury. The secondary nodules make their appearance in from one to three or four weeks after the injury, are usually quite painless and not tender to pressure, and are not surrounded by an inflammatory areola. In the course of several weeks they become soft, and the overlying skin assumes a bluish or purplish hue. Eventually they break down and form very indolent ulcers, with undermined edges and discharging a brownish, gelatinous, puriform material. These nodules have a chain-like arrangement in the lymphatics of the arm or leg and are frequently mistaken for tuberculosis, glanders, syphilitic gummata, or multiple fibrolipomata.

It must be remembered, however, that in some cases the infection does not start from a trauma and that it may not have that characteristic chain-like appearance. It may be either hypodermic, resulting in the formation of a large cold abscess, or it may be dermic and then simulate exactly certain lupiform syphilides, or cutaneous tuberculosis. Several cases have been

described that made their appearance on the face in the form of small nodules or dermic abscesses, which might be mistaken for barber's itch.

Diagnosis.—An indolent, refractory ulcer resulting from a small wound, or otherwise, accompanied by the formation of secondary nodules in the lymph-channels, should always arouse suspicion. In the typical cases a clinical diagnosis can easily be made, but this should always be supplemented by cultures. In the more atypical cases cultures are the only means of making a positive and correct diagnosis. The histological picture of the lesion is not characteristic. There may be epithelioid cells, lymphocytes, and giant cells, the finding of which may lead the observer to make a diagnosis of tuberculosis.

The organism grows well on coagulated blood-serum and agar, but growth is very slow in the incubator. The optimum temperature is about 82° F., but a good growth is obtained at 70° in the course of several days. Under the microscope the organism appears in the form of rather coarse, branching filaments, with many oval or ovate spores (Fig. 5). It stains well with



Fig. 5. Photomicrograph of *sporothrix schenckii* x 1,000.

methylene-blue and carbol fuchsin, and retains the stain by Gram's method.

When a diagnosis is desired from the Public Health Laboratory a small amount of the discharge should be collected under aseptic precaution, transferred to the blood-serum tube in one of our diphtheria outfits, and mailed to the Laboratory. The culture should always be accompanied by a short clinical note.

Treatment.—The majority of cases of sporotrichosis are very amenable to treatment with potassium iodide. If this drug is given in doses of 30 to 50 grains a day the lesions, as a rule, heal promptly and leave very little scarring. In the mild cases surgical intervention is not necessary. Complete extirpation of the lesions usually results in extensive scar-formation, and in very extensive cases extirpation may be a physical impossibility. Incision with a bistoury is indicated where the nodules have broken down, to evacuate the débris. Dr. Quain reports good results following the use of a cautery.

In conclusion, we wish to state that the Public Health Laboratory at the University is very anxious to get data from additional cases in North Dakota and Minnesota, and that the Director will consider it a great favor if you will correspond with him about suspicious cases.

REFERENCES

1. Jour. A. M. A. 1910, LV, 1000 and 2213.
2. Ibid. 1911, LVI, 1309.
3. Ibid. 1911, LVI, 1312.
4. Ibid. 1911, LVI, 1719.
5. Ibid. 1911, LVII, 482.
6. Jour. Cutan. Dis., 1910, XXVIII, 321.
7. Reported to Am. Assn. Path. and Bact., Chicago, Apr. 13, 1911.
8. St. Paul Med. Jour., 1904.
9. Johns Hopkins Hospital Bulletin, 1898, IX, 286.
10. Jour. Exper. Med., 1900, V, 77.
11. Indianapolis Med. Jour., 1899, XVIII, 272.
12. South. California Prac., 1909, XXIV, 1.
13. Kansas Med. Jour., Sept., 1909.
14. Diseases of the Skin, 6th edition, p. 1119.
15. Journal Cutaneous Diseases, 1910, XXVIII, 352.
16. Journal Cutaneous Diseases, 1910, XXVIII, 321.
17. Jour. Med. Research, 1910, XXIII, 137.

DISCUSSION

(Discussion before the Minnesota Association)

DR. H. W. HILL (Minneapolis): I desire to express great appreciation of Dr. Ruediger's careful and important work on this disease, especially in calling attention to an infection of which heretofore practically nothing has been known in this vicinity. To clear up the diagnosis of a condition which may, at any time, present itself for treatment, is a valuable step in advance. But it helps also in the recognition of other conditions which may resemble it and be confused with it.

It is not my custom to speak on subjects of which I am quite sure I know nothing. Since I can contribute nothing to what has already been said, this expression of appreciation is all I have to offer.

DR. HARRY RITCHIE (St. Paul): I venture to say that there are many in this audience who are hearing for the first time the story of the sporothrix and its infectious processes. So far as I know there has been no proven case of sporotrichosis reported

from this locality or surrounding territory. Either this is a rare infection limited to certain areas of this country, or we as clinicians have been overlooking or misinterpreting these cases. It is significant that during the last year more cases have been proven and reported than occurred during the twelve years preceding the publication of Sutton's paper in September, 1910. Sutton finds only five or six cases in the literature, although Schenck had told of his investigations in 1898. It would seem that the publicity of the matter has brought to our notice many cases hitherto unsatisfactorily called tubercular or syphilitic infections.

It was my experience when first hearing the paper of Drs. Ruediger and Miller, that my mind reverted to this particular case as one in which no satisfactory diagnosis was made and one which met the clinical symptoms of this infection.

Since this evening is one of demonstration I thought it would be apropos to bring this young lady before you, show her arm, and recite her history as a convenient way of bringing out the points in the differential diagnosis of this infection and the more ordinary infections with which we are familiar.

On June 3, 1903, while peeling potatoes, she made a slight nick with the knife on the middle finger of the left hand. It was a simple abrasion with little bleeding. In a few hours there was pain and some swelling. She was seen by Dr. H. E. Perrin, of Star Prairie, Wis., who applied the usual surgical dressings. In four or five days the lymphangitis was marked and the thumb much swollen. There was no swelling of the arm. An ulcer appeared at the elbow a few days later, and from then on for the next one and one-half years, ulcers appeared along the arm. These occurred in spite of constant surgical attention. The ulcer would begin by the appearance of a dark-red spot, very painful, becoming raised and hard, but without induration about it. There seemed no involvement of the soft tissues under the skin, such as we would expect in the coccal infections, but simply a hardening in the skin. This would break down, discharge a dark grumous material. The ulceration would follow and would take a variable time to heal. The original point of infection was twice curetted, but it refused to heal, and when I saw the finger one and one-half years afterwards, I amputated it.

While this case is not proven, its clinical symptoms, the disposition of the scars which, you see, are entirely in the skin, one above the other in chain-formation, the chronicity of the disease, and the failure of the usual surgical treatment, lead me to suggest that this was a case of sporotrichosis.

Probably there are now many among you who have had cases in which the diagnosis has been unsatisfactory and which would meet the requirements of this disease. I think we as clinicians should be on the lookout for such infections and be sure that a cultural examination be made of any suspicious cases, so that the question of distribution of the disease may be settled and principally in the interests of the patient, as a positive diagnosis may lead to a rapid cure, whereas the ordinary sur-

gical methods fail and cause a protracted illness. I think we must all agree that Drs. Ruediger and Miller have proven their case, and have presented to us one of the most important papers of this meeting.

(Discussion before the North Dakota Association)

DR. V. H. STICKNEY (Dickinson): During the summer of 1903, I think it was, five of these cases appeared in the practice of physicians located at Dickinson, two of them coming in my own practice. The first case, I think, appeared in the practice of Dr. Perkins, and the case attracted a great deal of attention. Inasmuch as this case and the subsequent cases had their origin in either sheep-shearers or ranchmen, and that they were people who had killed and skinned animals, we concluded that the trouble must have come from a septic condition found in the animals, either sheep or cattle, or perhaps in both.

DR. E. P. QUAIN (Bismarck): As Dr. Ruediger mentioned, I have spoken on this subject before, and said things I wish now had been unsaid.

I saw a few of these cases in close succession, and knew the condition was something unusual. None of us had seen anything similar and the literature gave no enlightenment. One case was of particular interest. A farmer had been dressing a chronic ulcer on the back of a heifer. He had used his finger to clean out sloughs and granulations. After finishing and wiping his hands but carelessly, he was called to the house to dress a fresh cut on his wife's hand. This wound failed to heal, but developed a process like the one under discussion. I spoke to a veterinarian about it, but could gain no information from him. We examined the discharges from several cases for tubercle bacilli, but failed to find anything but the usual pus bacteria. Later I had occasion to describe these cases to Dr. Bloodgood of Johns Hopkins, who gave as his opinion that it must have been bovine tuberculosis, and not finding any other explanation we continued to consider the condition tubercular. However, I did not feel satisfied that the diagnosis was correct, and I was greatly pleased to have Dr. Ruediger tell me, some two years ago, that he had solved the problem, and that my cases were sporotrichosis. Since then I have seen two cases, one quite advanced and the other in the early stage. Both were cured after a course of potassium iodide.

DR. JOHN M. ARMSTRONG (St. Paul): In 1904 I had a patient who worked in the stockyards at South St. Paul. He injured his hand by having it cut on an iron hook, and his forearm became infected. At that time there was some discussion as to the nature of the infection, and I suggested that it might be glanders, which I thought it was. We made no cultures, because it was not convenient, but we made some smears and dry-stained

them for glanders bacilli. It was my intention after that to make cultures and see what I could find. I never saw the patient again. He was an out-patient, and a friend gave him a bottle of whisky. He slept out of doors and died three or four days later. I did not then know anything about sporotrichosis.

At that time I became interested in the study of diseases that might be transmitted from domestic animals to man, and endeavored to look up the pathological history, but there is nothing in the literature at all. Some two years after that I got hold of a French work on diseases common to man and animals, and I think, if one pursues the subject, he will find that a good many diseases may be transmitted from animals to man. Since then I have come to believe that the case referred to was a case of sporotrichosis. I have been looking for a case of this kind ever since, but have not found it.

DR. BLAKE LANCASTER (Crosby): I would like to inquire whether any cases observed by Dr. Ruediger and others have gone to a fatal termination. Five years ago we had a case in the hospital where a livery man had taken a close shave and then slept in a blanket, and a lesion developed on the right side of the face close to the ear. It seemed to have pus in it, so we opened it. It got extremely bad, and the infection, instead of limiting itself, seemed to spread and become general, and inside of a week's time, or less, he was covered all over with these little ulcers. They were scarcely ulcers; they were more like an abscess, and the color was distinctly purple. I thought at once of glanders infection. Our state laboratory was not in operation at that time, and I sent a specimen to Dr. Folsom for examination, but he was not able to give me a definite an-

swer. I was wondering whether this was not the same thing that was the trouble in Dr. Armstrong's case.

DR. RUEDIGER (Essayist): I would hardly think that the case mentioned by Dr. Lancaster was a case of sporotrichosis. It was too acute and altogether too rapid in progress. I do not know of any fatal cases in this country, although a few fatal cases have been reported from France. Some of these did not yield to treatment with potassium iodide. I might state also that the infection observed in horses in this state does not always yield to potassium iodide.

I am glad to hear of additional cases that have been observed in North Dakota. I would be very glad to come into touch with additional cases because there are many points yet to be worked out in connection with this infection. We do not know, for instance, whether it is common for persons to contract the infection from horses or cattle.

In regard to Dr. Quain's failure to recognize the early cases, I must say that he is excusable for allowing the thing to slip by, as practically nothing was known about these infections at that time. The first case that was correctly diagnosed from this state came from Braddock. The home physician had made a probable diagnosis of glanders, whereupon the patient went to consult Dr. Hyde, of Chicago, who made the correct diagnosis. The case from South Dakota was also mistaken for glanders by the home physician. The patient next went to the State Hygienic Laboratory at the University of Wisconsin, but no diagnosis was made there. He next went to the Presbyterian hospital in Chicago, where the case was correctly diagnosed by Drs. Bevan and Hamburger.

TUBERCULOSIS OF THE KIDNEYS*

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Tuberculous conditions in the kidney may be grouped into two main classes: first, those in which the disease is part of a general miliary tuberculosis; second, those in which the tuberculous process is apparently primary in the kidney, and, in the early stages at least, confined to the kidney itself. The cases in the first group are not amenable to treatment and need not be considered in this discussion. Cases in the second group are always of interest to the general practitioner and the surgeon, and, in the majority of instances, radical treatment gives excellent results.

In about 80 per cent of all the patients with kidney tuberculosis who come to this clinic the

disease is confined to one kidney, but autopsy statistics show both kidneys to be involved in 75 or more per cent. The disease is therefore unilateral, as a rule, but as the body resistance becomes lowered the second kidney is involved as a terminal infection. The implantation of the tubercle in the kidney is hematogenous, and the involvement of the ureter and bladder is from inoculation by means of the infected urine.

Occasionally the bladder will be involved secondary to some tuberculous organ other than the kidney. In such cases chronic obstruction to the outflow of urine from the bladder may cause the ureteral orifices, if they are involved, to yield to the chronic back-pressure, thus permitting the entrance into the kidney of infected urine, and consequent tuberculous pyelitis.

*Read before the Southern Minnesota Medical Association, Rochester, August 3, 1911.

Primary tuberculosis of the bladder is rare. In a large percentage of cases tuberculosis of the bladder is secondary to kidney tuberculosis. In the male it may be secondary to tuberculosis of the prostate, seminal vesicles, and epididymus, and in the female to tuberculosis of the genital organs.

In the early stages of the disease there may be only a slight enlargement and congestion of the kidney, with a single tuberculous focus in one pole, usually the upper. Sooner or later the adjacent portions of renal tissue become affected by direct continuity, and with the advancement of the process the individual tubercles progress through their varying stages until caseation takes place. These tubercles tend to coalesce and result in necrotic areas of more or less extensive formation. With the advent

ease it is difficult, and probably impossible, to determine how long the tuberculous infection has been present before producing symptoms. Perhaps the earliest symptom arises from the caseation of the tuberculous focus, causing either a mild bladder irritability or pain in the renal region, or both. As an early sign there may be a smart hemorrhage, leaving blood in the urine for two or three days. So soon as the process is advanced enough to produce an infected urine, a cystitis is set up, after which the most distressing symptoms are referred to the bladder. Polyuria, vesical tenesmus, dysuria, and occasionally hematuria, though not often profuse, are all common symptoms. Fever may not be present until secondary infection takes place. An enlargement of the kidney may be sufficient to be palpated in the loin as a tumor. Sooner or later, from absorption, pain, and dis-



Fig. 1. Tuberculosis of the kidney.

of secondary infection the evidence of the tuberculous origin of the disease is gradually overshadowed, and the condition finally becomes a pyonephrosis, often so marked as to leave little evidence, either macroscopically or microscopically, of a tuberculous process, so that the gross cut-surface appearance of the organ varies from an isolated, caseating nodule in one pole to complete destruction of functioning tissue, the so-called "dead kidney."

Symptoms.—Owing to the latency of the dis-



Fig. 2. Tuberculous kidney.

turbed rest, the general health of the individual is affected, shown by loss of weight, appetite, and strength. The urine shows pus and evidence of blood in various amounts and, as Braasch and Thomas¹ have demonstrated, the tubercle bacillus is present in four out of five cases.

Diagnosis.—The fact that a tuberculous process in the kidney may attain considerable headway without producing symptoms sufficient to cause the patient to seek relief, renders an early

1. "Cystoscopic and Ureteral Diagnosis, with Special Reference to Tuberculosis and Calculus," Oct. 15, 1911.

diagnosis, when symptoms do appear, of the utmost importance. It is equally true, and fortunate, that, with the modern refined methods and accurate results of cystoscopy and ureteral catheterization, renal tuberculosis can be recognized early. To the general practitioner a cystitis, which is not gonorrheal or traumatic or due to stone or enlarged prostate, should be suspicious of a kidney lesion, probably tuberculous, and the patient should be given the benefit of an examination of the genito-urinary tract and of the kidneys by a competent cystoscopist. Upon catheterization of the tuberculous kidney the urine will usually show tubercle bacilli, pus and leucocytes, and a quantity of pale urine of low specific gravity, indicating that the function is greatly reduced.

Treatment.—When the diagnosis has been made and confirmed the question of treatment is easily decided. If it can be shown that the disease is confined to one kidney, removal of the kidney is indicated. At the present time this procedure is recognized as the rational and the best treatment offered the patient, and is proven so by comparative results.

In about 20 per cent of cases the ureter is involved to an extent to require removal. It has been the practice in this clinic to inject the ureter with from 10 to 15 m. of 95 per cent carbolic acid, and then tie with catgut. Treated in this manner, the ureter rarely gives subsequent trouble.

As regards conservative treatment: It is claimed that many patients recover spontaneously, but it should be borne in mind that tubercle bacilli may pass through a healthy kidney, and finding tubercle bacilli in the urine without other

evidences of disease does not prove that the kidney is tuberculous. In some instances patients will be supposed to be cured because the pus, blood, etc., have stopped coming down, but a cystoscopic examination may show the condition to be a pathologic nephrectomy, or "dead kidney." In these cases the ureter is closed, and the retained products are a constant menace to the patient.

Partial nephrectomies are rarely permissible, since microscopic foci exist outside of the area of macroscopic evidence of the disease.

Occasionally tubercle bacilli and infected urine will be found coming from both kidneys; if so, and the patient is in good physical condition, an exploration of the kidney may be made. If one kidney is found extensively diseased and the other in fair condition, the one most affected can be removed successfully, the remaining kidney not only functioning for both but often healing under the stimulus of an increased blood-supply.

It sometimes happens that the cystoscopist cannot determine the condition of one or both of the kidneys because of the extent of bladder involvement. In such cases both kidneys should be explored through a lumbar incision, in order to determine, definitely, the conditions before operation is undertaken. To neglect this precaution may cause the unnecessary death of the patient.

The immediate operative mortality of nephrectomies for tuberculosis of the kidney is small, depending largely upon the condition of the individual patient. For example, in a series of 99 consecutive cases operated on in St. Mary's Hospital there were but two deaths.

THE X-RAY IN THE EXAMINATION OF THE KIDNEYS AND URETER*

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The importance of the x-ray as a diagnostic agent is now universally acknowledged, and in no branch of medicine is its value more firmly established than in the examination of the kidneys and ureter. But this examination is by no means an easy one: good technic is necessary

to secure a clear plate, care and experience essential in interpreting it.

The technic which is employed in the clinic at St. Mary's Hospital may be outlined briefly as follows: In order to secure a clear and satisfactory plate, it is absolutely necessary to have the intestinal tract free from gas and fecal matter. We accomplish

*Read before the Southern Minnesota Medical Association, Rochester, August 3, 1911.

this by not allowing the patient to take any food for about twenty hours previous to the examination, by administering a thorough purgative twelve hours before, and by having the lower bowel flushed out by an enema an hour or two before the examination. The patient is then placed in the horizontal position, lying on

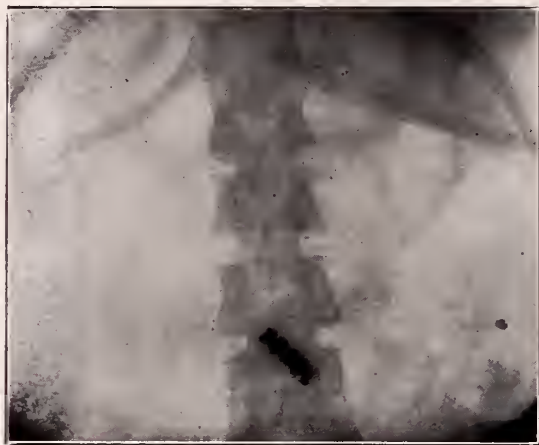


Plate 1. Shadows cast by gas and feces in the intestine. Patient not prepared for x-ray.

the back with the abdomen bared and the thighs flexed. This position relaxes the abdominal muscles and brings the kidneys as near as possible to the sensitive plate. The patient is then

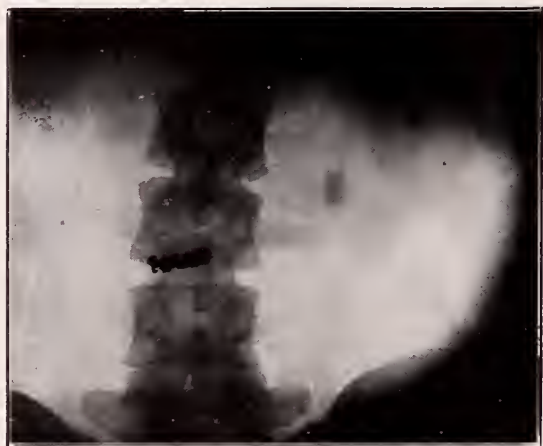


Plate 2. Shows two shadows over kidney-area. (See Plate 3 for localization.)

instructed to draw in the abdomen and hold the breath. By drawing in the abdomen the distance between the tube and the plate is reduced to a minimum, and by holding the breath the diaphragm is fixed and the kidneys are at rest. Two exposures are then made, one with the tube focused over a point in the midline of the

body midway between the umbilicus and the xifoid cartilage, and inclined slightly upwards towards the diaphragm; the second with the tube focused over a point midway between the umbilicus and the symphysis pubis and inclined downward towards the symphysis. The first of these plates will include both the kidney areas and the upper half of the ureter; the sec-



Plate 3. Collargol injection of the ureter (same as Plate 2). Shows the dilated ureter between a stone in the pelvis of the kidney and the bladder; a second stone in the cortex.

ond, the lower half of the ureter and the bladder. In order to secure a clear plate, the length of the exposure must be as short as possible. In this clinic the exposures vary from one to three seconds, depending upon the size of the patient.



Plate 4. Stylet catheter outlining the position of low-lying pelvis of the kidney.

No plate should be considered satisfactory unless it shows clearly the two lower ribs, the margins of the psoas muscles in the kidney region, and the pelvis in its longest diameter in the bladder region.

In the interpretation of a radiograph we should always bear in mind the fact that we are examining shadows, not objects, and we should consider carefully what objects may produce these shadows. Of these the most commonly encountered are, phleboliths or vein stones, calcified lymph glands, fecaliths and foreign bodies in the intestines, superimposed folds of the bowel, renal and ureteral calculi, exostoses of the ribs, vertebrae or bony pelvis, warts on the back or abdomen, and, occasionally, gall-stones. In some cases these shadows may be differentiated primarily, but it is difficult, and in many cases impossible, to make a diagnosis without a secondary combined cystoscopic and radiographic examination.

Too great stress cannot be placed on the intimate relationship that exists between cys-

toscopy and radiography, and how dependent the one is upon the other in the diagnosis of renal and ureteral conditions. By introducing through the ureteral catheter some substance capable of casting a definite shadow, e. g., one of the silver salts, and then radiographing, the outline of the renal pelvis and ureter will be shown clearly. In this clinic a solution of col-largol is carefully injected through a ureteral catheter, and the radiograph is then made. By these radiographs we can demonstrate the outline and position of the renal pelvis and ureter, and the relationship which shadows previously found bear to the urinary tract.

The accompanying plates illustrate the value of the Roentgen method of diagnosis and localization of stones in the kidney and ureter.

CYSTOSCOPIC AND URETERAL DIAGNOSIS, WITH SPECIAL REFERENCE TO TUBERCULOSIS AND CALCULUS*

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The comparative recent advance in the technic of kidney and ureteral surgery to the present almost perfect science, has made the use of the cystoscope and ureteral catheter a necessity in the diagnosis of all bladder, kidney, and ureteral lesions, as well as in the differential diagnosis of many abdominal conditions. Surgeons of ten to fifteen years ago were satisfied with a general exploration of the part supposed to be affected. In some cases it was necessary to make extensive incisions; in others two or three incisions were necessary before the lesion could be found.

We now find, however, that a careful cystoscopic examination and ureteral catheterization preceded by a general examination, including the x-ray and a complete history, will definitely localize a lesion of the urinary tract, affording a means of differential diagnosis between these lesions and most abdominal conditions.

A cystoscopic examination should always be preceded by a complete history, the important parts of which the examiner should be acquainted with, a thorough microscopic examination of the urine, and a radiograph of the abdomen and pel-

vis. With these data at hand a diagnosis of lesions of the urinary tract can be made with more certainty than in any other organ in the body. Moreover, the surgeon knows exactly where to make his incision, and is reasonably sure of what he will find.

A cystoscopic examination of the bladder will diagnose positively the presence or absence of cystitis and its severity, new growths, stones within the viscus, diverticulæ within its walls, the presence of trabeculation due to urethral obstruction or spinal-cord lesions, the condition of the prostate in relation to the bladder and its size, also the condition of the ureteral openings, and the character of the urine coming from either kidney. All of these findings are positive and cannot be contradicted by objective or subjective symptoms.

By means of the ureteral catheter we are enabled to explore the ureter, and ascertain the function of the kidney and the character of the urine passed from either side. By a microscopic examination of the urine obtained through the catheter we are able to diagnose pyelitis, double or single, hemorrhage from the kidney, and the presence of nephritis, and by staining the sediment we are able to isolate the microorganisms,

*Read before the Southern Minnesota Medical Association, Rochester, August 3, 1911.

if any be present. Information concerning the function of the kidney is obtained (1) by collecting enough urine from either side so that the specific gravity can be taken, (2) by observing the amount of urine passed in a given time or in comparison with the other kidney, (3) by the amount of time necessary for a previously injected substance to be secreted by the kidney and the time of its first appearance in the urine. (The so-called functional tests.)

The presence of obstruction or stricture in the ureter is shown by complete or incomplete obstruction to the passage of the catheter. The distance of the point of obstruction from the bladder can be easily measured by knowing the length of the catheter used, the length of the cystoscope, and the length of the catheter that is protruding from the cystoscope. A sudden continuous spurring of fluid from the catheter after passing a point of obstruction, and the catheter easily passing to its end without further hindrance, are diagnostic of dilatation in the ureter, the kidney, or in both. By draining such a dilatation with the catheter and then injecting (through the catheter) a colored solution, we are able to measure its size. If the urine collected does not show pus cells we have a hydro-ureter or a hydronephrosis, or both, but if the specimen shows pus in quantity, a pyoureter or a pyonephrosis, or both, are present.

In the diagnosis of tuberculosis of the urinary tract the cystoscope and ureteral catheter afford the only means of the localization of the lesion, and should always be used, where possible, before a surgical cure is attempted. A bladder infected with tubercle bacilli is very irritable, will not stand dilatation with air or water, bleeds easily, and causes the patient a great amount of pain. In some cases it is necessary to give a general anesthetic before attempting an examination. In the early stage of the condition the bladder may be but slightly or partially affected. The appearance of the meatus on the side affected is hyperemic and somewhat swollen, and the mucosa has an irritated or scalded appearance, as though the ureter were constantly expelling a highly irritating substance. The contraction of the meatus is frequent. Ulceration is not necessarily found, but will occur if the case is not operated on early. This condition is most often found on the affected side and the roof of the bladder, but in long-standing cases the other side may be affected, and in some cases the bladder is a mass of ulceration

and necrotic tissue. Where the ulceration is general in its distribution the bladder becomes so much contracted that in some cases cystoscopy is impossible. The localization of the meatus is sometimes very difficult, especially on the affected side, because of the abnormal position, due to contraction from ulceration. The opening may be located high up on the wall or roof, and sometimes it is found hidden in a mass of ulcerated tissue, so that, in these cases, it can be identified only by seeing the urine spurt from it, or by searching blindly in all the ulcerated areas with the end of the catheter. In cases of long standing the meatus may be very large and easily recognized by its size (the golf-hole meatus).

Strictures due to ureteritis very often cause obstruction to the passage of a catheter. Occasionally the ureter may not be open, being shrunken to a blind cord, because of the inflammation of long standing. In a small percentage of cases the ureter cannot be found, especially in cases of bilateral tuberculosis and where an autonephrectomy has taken place and no urine comes down. If the catheter can be passed the finding of turbid or cloudy urine containing tubercle bacilli clinches the diagnosis.

It is difficult to find tubercle bacilli, especially in cases showing secondary infection. In our experience we have been able to demonstrate the bacillus in four out of five cases. Obtaining urine from the normal kidney and estimating the function of this kidney, is an important step. Unless there is one perfectly normal kidney which has been proved able to do its own work and that of the diseased organ, a patient should not be referred for operation.

One should avoid passing the catheter into the side of the pelvis not infected, as there is danger of carrying infection. We have not seen a case of this kind, that is, one that was due to carrying infection on the catheter. Inserting the catheter far enough into the ureter to collect the urine is sufficient. If a good quantity of clear urine is seen, and bacilli are found in the other side, further catheterization may not be necessary, and some examiners make a diagnosis from this data.

A differential cystoscopic diagnosis of renal tuberculosis depends then upon the following points: (1) tubercle bacillus laden urine; (2) unilateral cystitis and cloudy tuberculous urine from the same side; (3) typical ulcerations; (4) extreme irritability and contraction of the bladder.

In the diagnosis of calculus in the urinary tract the examination should always be preceded by an x-ray examination of the abdomen and pelvis. The cystoscopic and ureteral examination interpret the findings of the x-ray and make a differential diagnosis. The number, size, and probable consistency of stones in the bladder can be diagnosed by carefully searching the entire bladder, and when not imbedded they can be easily seen. Stones in the prostate cannot be seen unless eroding their way through the bladder wall, or post urethra. Stones at the ureteral meatus may sometimes be seen protruding into the bladder, and no additional evidence is necessary in a diagnosis of these cases. Stones may be diagnosed in the lower or bladder portion of the ureter by causing a bulging of that portion of the ureter found in the bladder-wall. In passing the ureteral catheter complete or incomplete obstruction is encountered at the site of the stone. If the obstruction is passable a sudden rapid flow of urine comes through the catheter because of the damming back. The catheter, after passing the obstruction, will coil up in the dilated ureter and kidney pelvis, and in a great many cases its whole length may be introduced. When a catheter passes a stone obstruction, grating can usually be felt, and, when wax-tipped catheters are used, scratch-marks will be seen on the wax. The urine from a dilatation above a stone obstruction is usually of a deep-amber color when not infected. Where the obstruction is great and the drainage poor the urine becomes infected and then pus-laden, cloudy urine is found. In long-standing cases the function of the kidney may be entirely destroyed, and thick pus only will come down. In cases where it is impossible to pass a catheter or when it is not desirable to do so, meatoscopy is of diagnostic value. When stones are situated

near the meatus the contraction is exaggerated because of the irritation of the stone. The meatus appears swollen and an areola of inflammation may be seen around it. It may be torn by the passage of stones, or it may be pendant or gaping. The passage of cloudy urine from this side is important datum, but is not diagnostic, because an infection may have taken place on the other side.

Within the last few years we have adopted the combined method of diagnosis in the clinic at St. Mary's Hospital. By injecting a shadow-casting fluid and then taking a radiograph we are able to show on the plate the position of stones, as well as all abnormalities of size, position, and shape of the ureters and kidney pelvis. In this manner more positive diagnoses may be made of existing conditions, and it is the only way that a positive differential diagnosis can be made of small shadows in and about the ureters and pelvis of the kidney. This method is of the greatest value in the obscure cases, e. g., when the x-ray is negative and but a slight obstruction is felt in the ureter. If collargol be injected here the dilation can be seen easily above the point of catheter obstruction.

The cystoscopic diagnosis of ureteral stone depends then on the following points:

1. Meatoscopy; character of the meatus. If low down, stone may be seen. Bulging in the bladder segment of ureter may occur. Cloudy urine may be passed.
2. Obstruction to catheter, complete or incomplete.
3. Dilatation above obstruction: sudden, rapid, continued flow of urine; catheter easily passed to its full length or more than normal.
4. Grating as catheter passes stone.
5. Collargol plate.

NEOPLASMS OF THE KIDNEYS*

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In reviewing the literature of this rather extensive subject-matter, including a short summary based upon our own statistics, I am impressed with the fact that up to recent years our knowledge concerning renal tumors was in

an unsettled and unsatisfactory state. Their protean, gross, and microscopic character has made their study a difficult problem for both pathologist and clinician, and has introduced confusion of diagnosis and nomenclature into the literature. This is particularly true of the malignant and mixed types, for the greater number

*Read before the Southern Minnesota Medical Association, Rochester, August 3, 1911.

of benign growths have a fairly definite histology. For this reason, a review of case-reports and collected statistics, up to the last two decades, for purposes of exact classification, would be unscientific and misleading.

All those who have sought to make accurate use of the literature of renal tumors should recall the words of Kelynack¹: "Clinical progress halts for an advance in pathology." However, a study of the subject in the past twenty years, owing to an increasing knowledge of embryogenetic and histogenetic fundamentals, in addition to a more careful microscopic review of material in the various clinics and hospitals, has clarified the situation. We should give credit to Grawitz², who, in 1883, took the first important step in this direction, and gave the first accurate description of a tumor, conveniently termed *hypernephroma* by Birch-Hirschfeld.* Owing to the clinical importance and frequency of this so-called "hypernephroma," Adami³ suggests the term *mesothelioma*.

For purposes of description it is convenient to classify tumors of the kidney according to their histologic appearance. On this basis we may recognize tumors of epithelial type, meaning by this the various forms of adenoma and carcinoma, and those of connective tissue type, which would include such forms as the fibroma, myoma, lipoma, myxoma, angioma, and sarcoma. A third type, the teratoids or embryonal mixed tumors, forms a most interesting study. Adami includes the Grawitzian tumor in this category. However, for clinical purposes, a classification by Garceau⁴ appeals to me as being more practicable:

A. Solid tumors of the renal parenchyma.†

Malignant‡

1. Hypernephroma (*mesotheliomata*).
2. Carcinoma.

*The name "hypernephroma," first suggested by Lubarsch, signifies tumors derived from the adrenal. *Vir. Arch.*, 1894, Vol. 135, p. 195.

†It may be noted here that one of the most recognized and latest text-books on pathology states that the commonest tumors of the kidney are the sarcoma and the carcinoma, which is very contrary to our experience and that of the other hospital statistics of recent compilation. This view may be reconciled by virtue of the fact that the term carcinoma at least is used in a histologic sense rather than a developmental one; for the various new growths of the kidney have much more in common than have epithelial and connective-tissue neoplasms elsewhere, inasmuch as the kidney, both in its secreting mechanism and supporting framework, is derived entirely from the mesoblast.

‡Usually *mesotheliomata* wrongly diagnosed.

3. Sarcoma.

- Round cell.
- Spindle cell.
- Fibrosarcoma.
- Alveolar sarcoma.
- Liposarcoma (*angiosarcoma*).

4. Adenoma.

Benign

1. Adenoma.
2. Angioma.
3. Lipoma.
4. Fibroma.

B. Embryonic tumors.

1. Dermoid (*teratoma*).
2. Rhabdomyoma.§
3. Mixed tumors (*mesotheliomata*).

C. Tumors of renal pelvis.

1. Epithelial growths.
 - a. Papilloma.
 - b. Papillary epithelioma.
 - c. Epithelioma (*non-papillary*).
2. Mesodermal growths (*rare*).

(Alveolar and round-celled sarcoma)
mesotheliomata.

The benign tumors of the kidney are not important. The adenoma varies in size from that of a millet-seed to that of a walnut, or even larger, and is usually found in the cortex. Histologically, an alveolar, a tubular, and a papillary form can be recognized. Occasionally the tubules are dilated into cysts—*cystadenoma*.

Angioma, more correctly *telangiectasis*, is a rare condition. It may be situated in the pyramids or the pelvis. When projecting into the cavity of the kidney it may give rise to serious hemorrhage.

Lipomas are found beneath the capsule and the cortex of the kidney. These tumors are of extreme rarity. There is but one specimen recorded in the pathological records of the Boston City Hospital during the past ten years. It was a small tumor, 3 mm. in diameter, situated on the surface of one of the pyramids. A case reported by Warthin⁵, however, was remarkable, the tumor being the size of a child's head. Mitchell⁶, in a review of the literature, says a number of observers have reported from five to eight cases.

Fibroma is somewhat common in the kidney, but insignificant in importance. In the Massachusetts General Hospital there is a record of a small fibroma 3 mm. in diameter. Bruntzell⁷

§In the first classification this would be included with those of connective-tissue type, to which may be added the leiomyomas and fibroleiomyomas.

had a rare case of a fibroma weighing twenty pounds.

Myxomas are rare, and the majority very probably represent mucinous degeneration of connective-tissue growths. Bezold⁸ and Hallen⁹, however, have each reported a case of true myxoma.

With respect to the embryonic tumors, there are three main types: the teratomas, or dermoid; the rhabdomyoma; and the mixed tumors, the latter popularly known as the tumor of Wilms.

Dermoid growths contain heterogeneous tissue, elements resembling tissues normally found elsewhere. The perfect teratoma, which reproduces fetal parts most faithfully, must be regarded as a fetal inclusion. These growths are rare, and the literature deals mainly with the type of cases illustrated by those two classic cases reported by Paget¹⁰ and Haeckel¹¹.

The rhabdomyoma is a very rare tumor. This type was first classified as a distinct tumor by Rokitsky¹², who described such a growth of the testicle. These tumors grow in various parts of the body as evidenced by Brock's¹³ collection of 67 published cases. Ribbert¹⁴, however, has classified a pure kidney rhabdomyoma in spite of the close histologic relationship of sarcoma and the mixed tumor.

The mixed tumors of the kidney furnish an interesting study. Their pathogenesis is not yet decided. Wilms¹⁵ was the originator of the theory that the growth is due to inclusions of the myotome and similar structures. His theory having found the most supporters, this common renal growth of infancy and childhood is often known as the tumor of Wilms. There is much opposition to Wilms' belief. It presupposes too many possibilities, because he derives the tissues from the myotome, from the mesenchyma, and from the Wolffian body. Herzog¹⁶ believes that the tumors arise from inclusion of myotome or sclerotome, or both. Wilson¹⁷ says that the characteristic skeletal contents,—muscle, cartilage, etc.,—of the Wilms' tumor is explicable only on the hypothesis of their derivation from cell inclusions from the sclerotome, a portion of the mesothelium, which is well differentiated from the primitive nephrogenic tissue. Of these tumors we have had but one in our surgical series, although a considerable number have been seen in the diagnostic clinic. Owing to their rapid growth, the youthful age of the patient, and early cachexia, surgery has little to offer, although more cases are operated upon from year to year.

Albarran¹⁸ and Imbert¹⁹ have found that the mortality is progressively less in the later statistics. But recurrences often take place rapidly in spite of a most thorough operation. Walker²⁰ gives six months as the average time between the operation and the recurrence, when it does take place.

The papilloma in pure form is the commonest tumor of the renal pelvis. In Albarran and Imbert's series of 54 cases of primary tumor, in 24 there were pure papillomatous growths. In 1904, Reynolds²¹ reported one case with massive hydronephrosis due to the fact that the ureteric orifice was blocked by the tumor masses. In our last series we had one malignant papilloma of the renal pelvis.

Because of their greater frequency, the commoner malignant tumors of the kidney are of more clinical, pathological, and surgical interest. The hypernephromata are by far the most frequent tumor of the adult, the carcinoma much rarer than former compilations would lead us to believe, and the sarcoma in its various forms (see table) quite frequent, occurring in adult and child, although relatively more common in the latter.

The following compilations are employed to give an idea of the relative incidence of these renal growths. Israel's²² table is compiled from surgical material alone. It reads as follows:

Hypernephromata and endothelial adenomata	17
Carcinomata	8
Malignant papillary cystomata..	4
Sarcomata	4
Mixed tumors (teratomata)....	2
Tumors which could not be definitely classified as epithelial..	5
Papillary carcinoma of renal pelvis	1
Total	41

The following is a list of renal tumors compiled from cases from the autopsy-rooms and from the operating-rooms in the Massachusetts General Hospital and the Boston City Hospital during a period of ten years (1899 to 1909—Garceau):

Hypernephroma of the kidney, parenchyma (large)	33
Hypernephroma of the kidney, parenchyma (small)	12
Carcinoma of the kidney, parenchyma	3

Papillary cystadenoma of the kidney, parenchyma (large)...	4
Papillary adenoma of the kidney, parenchyma (small)....	11
Papilloma of the renal pelvis...	1
Sarcoma	2
Fibroma	14
Lipoma	5
Total	85

Note Albarran and Imbert's confusing compilation of 380 cases, which the authors admit is of little value:

Adenomata	10
Epitheliomata	188
Hypernephromata	85
Sarcomata	82
Mixed tumors	10
Fibromata	2
Lipomata	2
Teratomata	1

Total380

The obvious discrepancies of this compilation are due to the confusion of the nomenclature and unsettled histological circumstances. Many of their epitheliomata and sarcomata would now unhesitatingly be classed as hypernephromata.

Our statistics from January 1, 1901, to June 1, 1911, are compiled from purely surgical sources through a record of patients operated on in the clinic of St. Mary's Hospital. I am indebted to L. B. Wilson²³ for the greater portion of these statistics:

Hypernephromata, removed entire	36
Exploratory operation for very probable hypernephromata....	4
Exploratory operation for malignant tumor of unknown origin	3
Carcinomata (2 secondary to stone)	3
"Carcinoma sarcomatodes"	1
Papillo-adenocarcinoma	3
Malignant papilloma of the renal pelvis	1
Sarcomata (perhaps mesotheliomata)	4
Mixed tumor	1
Total	56

Thus over 71 per cent of our series of renal tumors were hypernephromata, which is a relative good index of their frequency. This percentage might have been raised if we had se-

cured microscopic sections of the exploratory malignant tumors of unknown origin. The Massachusetts General Hospital and the Boston City Hospital records showed an average percentage of 78 of large hypernephromata.

Well-authenticated cases of renal carcinoma, sarcoma, and malignant adenoma are relatively few. Barring the sarcomata of children, these tumors are most common between the ages of 40 and 70, at a time when malignant disease usually manifests itself. Reiche²⁴ has taken figures from the pathologic records of 11,930 cases of malignant disease affecting various parts of the body, and shows 80 primary malignant growths of the kidney, a proportion of 0.7 per cent. Our knowledge of carcinoma of the kidney is limited because typical cases are exceedingly rare, and it is only in the last few years that these growths have been definitely separated from other forms of renal tumor.

Bland Sutton²⁵ calls attention to the peculiar age-distribution of the sarcomata. They are common during the first five years of life. The second period of liability is from 30 to 50 years. Of course there are sporadic cases between childhood and 30 years of age. Furthermore, renal sarcomata of infant life are lodged in the kidney pelvis. Those of adult life originate mainly in connection with its capsule.

The so-called hypernephroma, or the more scientific term, *mesothelioma*, is interesting and important because of its frequency (representing over 70 per cent of adult tumors), because of its mixed histology and peculiar malignant and metastatic properties, and because of the various hypotheses still propounded regarding its genesis.

The diagnosis of hypernephroma is sometimes difficult to make. These growths usually present a diagnostic triad of pain, hematuria, and tumor. In a series of 32 cases, 29 had pain in the region of the affected kidney; 28 cases passed perceptibly bloody urine; and in 30 cases a tumor was palpable on physical examination. Diagnostic accuracy presupposes a thorough physical examination, a cystoscopic examination, and collargol plate (Braasch²⁶), and an examination of the lungs, liver, and bones, including the x-ray. Metastases should be searched for as they are sometimes the first symptoms of the trouble. In the absence of hematuria the difficulty in diagnosing this tumor is obviously increased. But, fortunately, bleeding usually ensues quite promptly in varying amounts as the tumor approaches the pelvis, or where the growth pushes

through its condensation-capsule into the kidney tissue.

As a rule this tumor is highly malignant. The prognosis depends largely on the thoroughness with which the operation has been performed and the stage of the disease. There are now about 20 patients in our series alive between one and five years following operation. One patient has recently returned for the removal of a metastasis of the posterior lower left chest, involving the lower three ribs, following a nephrectomy for a large left hypernephroma three years ago.

SUMMARY

1. Up to within the past twenty years our knowledge of the histopathology of renal tumors was unsatisfactory, and until recently exact classification was not possible.

2. Earlier compilations showed much confusion of nomenclature and misleading classification, affecting particularly the malignant renal neoplasms. What is now commonly termed the *hypernephroma* (one type of "mesothelioma" of Adami) was variously termed *epithelioma*, etc.

3. Benign neoplasms are not of much clinical importance, because they rarely bleed, and only through mechanical pressure after attaining a large size are they inimical to life of the host.

4. Embryonic renal tumors are interesting. Their genesis is not yet conclusively decided. The tumor of Wilms is the most important of this group.

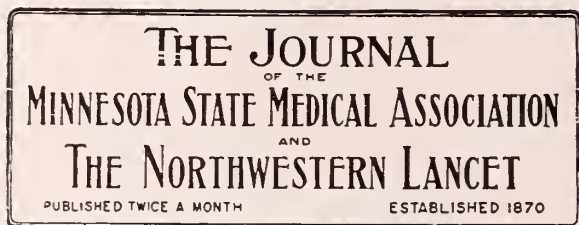
5. Latest statistics from various surgical clinics covering reports of carefully studied material, show the preponderance of hypernephromata; next in order, carcinoma, usually secondary to stones; sarcomata; malignant papillary cystadenomata; and mixed tumors.

6. The hypernephromata are the most im-

portant tumors clinically and histopathologically. They represent over 70 per cent of the tumors of the adult. Forty renal tumors out of the series of 56 surgical cases were hypernephromata. Pain, hematuria, and tumor are diagnostic features. They have peculiar histologic and metastatic properties. They are highly malignant, as a rule; and early, thorough operation is the only treatment.

REFERENCES

1. Kelynaek: "Renal Growths, Etc.," 1898 (quoting Pfeiffer, Medical Bulletin, U. of Penn., October, 1910).
2. Grawitz: Virchow's Arch., 1883, Vol. 93, p. 39.
3. Adami: "Principles of Pathology."
4. Garceau: "Tumors of the Kidney," 1909.
5. Warthin: Quoted by Kelynaek, "Renal Growths," London.
6. Mitchell: New York Medical Journal, November, 1908.
7. Bruntzall: Berlin Klin. Woch., 1882, Vol. 19, p. 745.
8. Bezold: Quoted by Adami, "Principles of Pathology."
9. Hallen: Quoted by Adami, "Principles of Pathology."
10. Paget: "Lectures on Surgical Pathology," London, 1853, Vol. 2, p. 84.
11. Haeckel: Berlin Klin. Woch., 1902, Vol. 39, p. 964.
12. Referred to by Brock. Zeit. für Ges. d. Aerzte, Wien, 1894, Vol. 5, p. 331.
13. Brock: Zeit. f. Ges. d. Aerzte, Wien, 1894, Vol. 5, p. 331.
14. Ribbert: Geschwülstlehre, Bonn, 1904, p. 297.
15. Wilms: Mischgeschwülste, Leipzig, 1899.
16. Herzog: Am. Jour. Med. Sci., 1900, Vol. 119, p. 697.
17. Wilson: "A Comparative Study of the Histology of the So-called Hypernephromata and the Embryology of the Nephridial and Adrenal Tissues. January, 1911, Jour. Med. Research.
18. Albarran: "Les Tumeurs du Rein," Paris, 1903.
19. Imbert: "Les Tumeurs du Rein," Paris, 1903.
20. Walker: Annals of Surgery, 1897, Vol. 26, p. 586.
21. Reynolds, H. B.: "Papilloma of Renal Pelvis with Massive Hydronephrosis," Annals of Surgery, 1904.
22. Israel: Chir. Klin. d. Nierenkrankheiten, Berlin, 1901, p. 443.
23. Wilson: "Hypernephromata," Old Dominion Journal of Medicine and Surgery, Vol. X, No. 4, April, 1910.
24. Reiche: Deutsche Med. Woch., 1900, Vol. 26, p. 121.
25. Bland-Sutton: "Tumors, Innocent and Malignant," 1901.
26. Braasch: "Recent Developments in Pyelography," Annals of Surgery, November, 1910.



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PUBLICATION COMMITTEE OF THE COUNCIL
THOS. McDAVITT, M. D. J. L. ROTHROCK, M. D.
St. Paul St. Paul

F. A. KNIGHTS, M. D.
Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR
Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

NOVEMBER 1, 1911

THE USE AND ABUSE OF SALVARSAN

When the first description of salvarsan appeared there was an immediate and great demand for the drug; now there seems to be enough "606" to flood the market. It is surprising how quickly a new thing is picked up, particularly when the new thing is not fully proved. The early literature was somewhat hysterical in its claims, yet, withal, the warning from its discoverer was largely disregarded. In a measure the discovery became public property, and minute descriptions of its preparation and application were published in many magazines other than medical. The result was that "606" was demanded by the syphilitic. He knew he had syphilis, and he believed a quick remedy was at hand. Physicians were carried off their feet and used the new remedy indiscriminately with the usual result,—occasional success, frequent failure or, at best, uncertain effects.

Not infrequently patients were made worse, and others died after the injection, but this did not stop the experimenters. Even when the tabulation of cases and results of injection were published the practice continued.

The literature records many failures, particularly in old syphilitics, and more particularly when the patients suffered from arterial and degenerative diseases. It has been conceded by many writers that the best results are obtained

in acute infections and when the initial lesion is of recent origin, yet there is still much doubt as to whether salvarsan is any better than mercury.

Those who have used salvarsan and followed it by mercury do not know whether the mercury or the salvarsan is responsible for the improvement.

It has been generally observed that mucous patches and specific eruptions and sores improve rapidly under salvarsan. The day has not yet arrived when one can give a positive opinion of the ultimate results of the new arsenic preparation.

By far the greatest danger of this new remedy is the reckless traffic to which it has succumbed. When it first appeared, the supply was limited, and its cost was correspondingly great, but in a short time the price was within reach of all physicians, yet the price to the patient was without a lid and many physicians reaped a disreputable harvest.

From two hundred and fifty dollars down to anything the patient could advance, was the price, and it is to the discredit of the profession that a few physicians made diagnosis of syphilis when no syphilis was present, in order that they might use the remedy. This may seem like an untruth, but if the stories of patients can be relied on, it is a fact.

On the other hand, the drug has been given to any patient who had syphilis, regardless of the stage of the disease, its character, or its relation to the conditions found. Such uncalled for, unscientific, and underhanded measures should be exposed. The individual and the drug should be carefully considered before an injection is undertaken.

If the truth were known, it is quite likely that a large number of failures would be recorded, that many deaths have resulted from the abuse of the drug, and that thousands of unnecessary injections have been made by thoughtless, careless, and unscrupulous men.

When a man who occupies a position of trust is either ignorant or unable to diagnose syphilis and carelessly injects "606" into a human body and charges an exorbitant fee for his services, he is casting discredit on the profession.

The charlatan would hesitate to administer a new drug that carries danger with it, but the physician who gives "606" willfully and without due consideration for his patient, particularly when the question of syphilitic infection is un-

certain, and he does not send his subject to an expert for diagnosis, becomes worse than a quack.

Since the above was written and put into type, Professor Paul Ehrlich has delivered an address upon his discovery of salvarsan, before the medical section of the congress of German men of science sitting at Karlsruhe. He dwelt upon the injurious effects of the drug to which he has always paid the most careful attention. In all of his addresses and reports he has emphasized the necessity of care in the selection of cases and care in the use of the drug. When salvarsan is incautiously used, the patient may have fever, headache, vomiting, and diarrhea, and for a time Ehrlich believed these symptoms unavoidable, but experience has taught the discoverer that these symptoms are usually due to the form of solvent used, and that when absolutely freshly distilled water was secured the symptoms could be altogether avoided. This, of course, applies to the general rule advocated by Ehrlich,—the proper case and the proper dose at the proper time.

The number of deaths from salvarsan is relatively small in comparison to the number of cases treated, and these deaths were due to the advanced stages of syphilis with complications and where salvarsan was a last resort. Ehrlich believes salvarsan is a relatively harmless remedy and that acute reactions are due to faulty technic. He also believes that in acute syphilis 90 per cent of the cases may be cured. This assertion is a rather positive one considering the failures encountered by men who give the drug in a faultless manner.

It has also been shown that salvarsan is an efficacious remedy in the intermittent fevers that abound in Russia, Spain, and the Congo, and one injection is usually sufficient for a cure.

Frambesia, or the yaws, a contagious disease occurring in the West Indies, Guiana, and some parts of Africa, and characterized by tumors resembling raspberries, yields readily to salvarsan. Of 900 patients treated in Surinam only three suffered a relapse. Equally remarkable results have been achieved in the case of tertian ague, or the Aleppo boil (a furuncular skin disease prevalent in Syria, Persia, Barbary, and other warm countries), and bilharzia, a genus of fluke-worm which enters certain blood-

vessels of man, causing hematuria. It also is found in the livers of sheep and causes destructive lesions.

After salvarsan and its uses have been sifted down and more scientifically applied, it is quite possible that it will attain a standard place in our therapeutics, but it must be tried out thoroughly before it can be accepted as a safe remedy.

A NEW INFECTIOUS DISEASE IN THE NORTHWEST

We desire to call special attention to the paper of Drs. Ruediger and Miller, which appears in this issue, and we do so for two reasons.

The paper, in substantially the same form, was read before the North Dakota Association in May, and was read, in its present form, before the Minnesota Association last month. We publish the discussion which followed each reading, and by it we see that leading men in the two states have failed to recognize the disease, and this fact emphasizes the value of the work done in the laboratories of our state institutions. The services of state laboratories are of course at the command of every physician in each state, and Dr. Ruediger requests the physicians of Minnesota to report to him suspected cases of this character, and by this means to avail themselves of the information and experience obtained by himself and Dr. Miller in their work in this line.

But this paper emphasizes an even more important fact than the discovery of this disease in the Northwest. It emphasizes the manifest value of a closer alliance between the medical men and the laboratories of Minnesota and the two Dakotas. Possibly many of our readers do not know that each of the three states maintains, in connection with its State University, a research laboratory that is doing scientific work of high character, and that the medical men who are not in touch with this work in their respective states, are, to say the least, losing an opportunity the result of which will surely in time bring discredit upon the profession.

We think we may also add that the value of such information as this paper conveys, is very greatly enhanced by its publication in a journal that is read by every progressive physician in the three states. We say *every* progressive physician. We think the truth demands

no exception, for not a single progressive physician—not one who recognizes the obligations of his profession—can fail to be a member of both his local and state societies.

NO MORE SURGERY: A NEWSPAPER IMPRESSION

There lie upon the editor's table almost two score of clippings from city and country newspapers, mainly editorials or editorial notes, dealing with the recent meeting of the Minnesota State Medical Association at St. Paul; and from these one may quite accurately gain the impression of that meeting which goes to the laymen of the Northwest.

If this impression had been made upon the representatives of such papers it would have a value quite different from any that may properly be attached to it gained, as we know it was by the reporters of one or two (practically one) St. Paul daily newspaper, and given through such paper to outside newspapers. However, the impression is an interesting one, and it is also one to be reckoned with, for it goes to the people. We give that impression in a part of the caption of this editorial—*no more surgery*.

Our readers, whether present or not at such meeting, will readily understand that this impression came from a proper plea for conservatism in surgery. This plea, both in the matter of surgical operations and in the giving of drugs, has always been, and always will be, made; and it is based upon an increased knowledge in both departments of medicine. It is in nowise an acknowledgment on the part of our best men that they have been in error, except as error is an inevitable concomitant of incomplete and increasing knowledge, but men in every profession become both radical and conservative without a proper foundation for such position, and hence comes reproach to the profession. Radical surgery is too often life-saving to be classed below conservative surgery, but radical surgery is safe only when practiced by the best surgeons; and there is just as much justification in a cry against *conservative* as against *radical* surgery.

If the readers and writers of surgical papers are not to be misunderstood by laymen, and misunderstood perhaps to the lasting disadvantage of laymen themselves, the words of all such papers should be carefully weighed, and the probable impression that they will make upon laymen should be duly considered.

KNOCKING DR. WILEY

One H. L. Harris, of New York, styling himself as "publicist," is out with a toy hammer trying to make a dent somewhere that will make doctors believe that Dr. Wiley is not to be credited.

This man Harris has the courage (if that is the proper word to use) to send a personal letter to the Secretary of the Minnesota State Medical Association telling him that "Press reports, however, are so garbled that the public is not informed of the true conditions existing. That Dr. Wiley, instead of being vigilant, was very negligent in his duties, was disclosed in the investigation recently conducted by the committee on expenditures. It has long been supposed that Dr. Wiley is the doctor's friend. That such is not the case, however, is shown in letters written by Solicitor McCabe to Dr. Wiley."

Harris also sends copies of McCabe's letters and encloses a pamphlet on "Natural and Conventional Food-preservatives."

Somehow something went wrong, and McCabe was relieved of his duties by the department head, and, incidentally, President Taft endorsed Dr. Wiley. Evidently the food-preservative Harris was "peevish" by the loss of McCabe and the endorsement of Wiley by the President. Harris should not sit and sulk in his corner. He should get out and hear what the doctors and the people think of the attitude of Wiley.

Evidently, McCabe is feeling sore over the outcome of the investigation, for he has written sharp letters to Dr. Wiley demanding that the law against fraudulent drugs be enforced. Wiley was usually outvoted by McCabe and Dunlap when the three were discussing frauds, and Wiley had his hands securely tied by the majority of the two. Now perhaps Wiley can tell McCabe to enforce a few laws.

In one letter McCabe is covered with indignations, surprise, and alarm to think that Wiley finds 25,000 remedies that belong to the nostrum class, and that he has not prosecuted the whole list, notwithstanding there are no funds available.

There are many people who get wrathful and demand enforcement of laws when they know that there is no money to do it with. Alas! poor McCabe and Harris, two unfortunate men who are eager to do their duty and yet cannot. The public is on the side of Dr. Wiley and opposed to the dilatory tactics of the Department of Agriculture and Solicitor McCabe.

As the matter now stands, the investigation was a good thing and is the beginning of a clearer atmosphere in Washington, and it will not be surprising if the Department of Agriculture is given new life and more funds, and perhaps new men to aid Dr. Wiley. Perhaps, let us hope, Congress will do something toward the establishment of a Department of Health and relieve ignorant departmental heads from going outside of their legitimate duties. The League for Medical Freedom seems to be losing its grip, and the people are demanding protection rather than petty interference when it comes to preserved foods and useless and over-advertised drug cures.

A chorus of newspaper approval indicates that the position that Dr. Wiley has taken is a wise one, and today they stand firmly for pure foods and a reduction of the death-rate.

THE SPECTATOR

There is only one thing on earth so interesting to study and so profitable to cultivate as a boy, and that is his sister. If I were to choose whether I would stand high in the esteem of children or of grown people, I would choose the children. This for two reasons: First, when a child likes you he generally likes you with his whole soul, might, mind, and strength, but when grown people like you the reservations they make in their minds, if mapped, would look like the Forest Reserves on the map of Oregon. And for the second reason, a child will probably like you longer than a man, because his expectation of life is greater.

How many of us take the trouble to visit the primary grades of our public schools, or the primary department of our Sunday-school? How many of us waste time after supper playing ball or pulling the cart for the children on the next lot? The things of a child as looked at from the viewpoint of the grown person are trifling. If we stop to say good morning to him we feel that we have stooped to do it and have lost a little time by the act. I know a boy who remembered for forty years that a woman called him "little trash," and that at about the same time another woman sat down by him and told him a story, apparently for the pure love of it. I know which one of those memories I'd

rather have carried for me in a boy's thinking department.

In our village was a young physician who at times would visit at the school-building. His entry into the primary room almost broke up the order of the day, so much did the little folks desire to run and jump into his lap. At recess he was covered with the little people, and, large though he was, he had not area enough to accommodate the little folks who wanted to climb onto him. That physician's standing in village society was to be envied, and likewise his income. At this day, twenty-five years later, though he has long been wealthy enough to retire from practice, these children, who are now heads of families, will not let him quit.

Very little investments in very little people are very profitable. A brother of the writer, a physician, told of a little child at whose home he was attending the mother, dangerously ill. The little boy was slightly ailing, and the doctor at each call would, for his comfort, make mock examinations and prescriptions. One morning the doctor in his haste forgot the little chap, and when he drove away the child was unconsolable. "But, Harry," said his sister, "you know you are almost well, and the doctor probably thought you didn't need any medicine." "Yes," he sobbed, "but he mighta said 'poor little fellow.'"

Whether a man attracts or repels little children depends more on what he is than what he does. The other day I saw a wolfish-looking fellow trying to coax a baby to come to him. A coyote would have made as good progress trying to coax up a pullet. Children don't know everything, and they don't know much when very small; but they know whether you are smiling or just showing your teeth. If a man doesn't have children in his heart he had better confine his social efforts to grown folk, and look out that he doesn't step on the little ones. The man without children in his heart is usually a man without children in his family. About the only way to regenerate such a man is to have a baby just big enough to make a big noise handed to him by the person authorized to do so, and be told to walk the floor with it at about 1 A. M. He can't throw it away, because his wife thinks so much of it. He can't spank it, because there isn't enough of it to spank. He can't tell it to shut up, because it doesn't know anything. And there he is—whipped. And he should be whipped. The chief reason why any decent man has not learned to like children is that he has such

an abnormally swelled opinion of himself. If anything can humble a top-lofty man it is a little pink, limp, warm wad of a baby, wakeful and lunguistic.

For a good many years before the junior partner came to our house I had looked on babies out of the tail of my eye. They were not in my line of business, and as others cared for them I did not need to. About one month after the Great Event, the foolish father of our household was riding down town in a car, seated next to a woman with a babe in her arms. After watching the babe a considerable time he simply had to ask the lady—a person he had never seen before—"How old is your baby?" "He's four months old," she replied. "I have a baby," said the father in explanation, "and I was wondering how old he'd be when he looked like that." Did you ever hear of a man past thirty so silly? I never did.

Before our baby came none of the family men I knew said much to me about their children. But the very next day, as I was radiantly telling a man in the car about it, he told me some inside history about his four children, and particularly the sad details of the death of their eldest, a fine little fellow of six years (he had then been dead ten years). I had known this man for ten years, but he had never spoken to me of his children before; and here he was telling me a heart story that I am sure he did not often tell. Why he let me into his sanctuary any parent knows; I was not fit before to come in.

If a child cannot civilize a man, that man is a hopeless case. Better put him under fidelity bonds before you trust him far.

CORRESPONDENCE

DR. SIPPY'S VIEWS

Brainerd, Minn., Oct. 19, 1911.

TO THE EDITOR:

Your editorial comments (issue of Oct. 15th) on the program presented at the recent meeting of our State Medical Association, are in error, in my opinion, as regards Dr. Sippy's Oration in Medicine, and it is important that this error be corrected. You say:

"Dr. Sippy presented his subject, that of gastric and duodenal ulcers, in a very interesting manner to both general practitioner and surgeon. Each was satisfied that Dr. Sippy was on his

side, although it was made very plain that, under careful management, gastric ulcer is an easily medically curable disease."

I was present at the delivery of this address, and I consider that the subject was handled in a masterful manner, and am in agreement with practically all that the essayist offered. But he divided these cases into two classes: First, those which must be considered strictly surgical from the date of examination; second, all others (the majority) were to be considered as medical cases, some of which might become surgical in the future.

I do not feel that Dr. Sippy needs any protection in this matter, but he is entitled to correct reporting, and more especially for the benefit of absent members and their patients.

Yours truly, WALTER COURTNEY, M. D.

A CHANGE OF ATTITUDE

Minneapolis, Minn., Oct. 18, 1911.

TO THE EDITOR:

In view of the considerable changes in the attitude which public-health men are taking towards public-health procedures, I am asking the members of the Minnesota State Board of Health and some others interested in public health to secure and read the *Engineering News* of October 12, 1911. On pages 444-445, under the caption, "What's What in Public Health," appears an editorial of considerable importance, considering its source and circulation, and it should be read by all who are interested in public-health measures. There are also two articles on pages 436-437 of the same issue, one by Prof. E. O. Jordan, Professor of Bacteriology, Chicago University, and one by myself.

I am calling your attention to these principally because more or less indirect criticisms of my statements have appeared, or have been made in private, and I wish to present evidence that can be used to convince others that these ideas are really changing, and that public health is taking on a new aspect.

The *Engineering News* can certainly be obtained at any public library, or, failing that, it is subscribed to by most civil engineers who would doubtless be glad to let anyone interested see the issue in question. Copies of the paper may be had by addressing *Engineering News*, 220 Broadway, New York City.

H. W. HILL, M. D.

Director, Division of Epidemiology,
Minnesota State Board of Health.

REPORTS OF SOCIETIES

PARK REGION SOCIETY

The Park Region Medical Society held their regular meeting on October 11th, at the State Hospital for the Insane at Fergus Falls. The attendance was twenty. The program consisted of a presentation of mental and nervous cases by the physicians at the Hospital, Drs. Wilcox, Lovell, Denim, and Johnson. The cases were splendidly presented and proved both interesting and instructive.

L. A. DAVIS, M. D., Secretary.

MONROE COUNTY SOCIETY

The Society held its tenth annual meeting in Austin on Oct. 11th. A revised fee-bill was adopted and will soon be in the hands of the members. Intensely practical papers on the "Heart" and on "Obstetrics" were presented by Drs. P. T. Torkelson, of Lyle, and E. V. Smith, of Adams.

The following officers were elected for 1912: President, Dr. E. V. Smith, Lyle; vice-president, Dr. G. M. F. Rogers, Austin; treasurer, Dr. G. J. Schottler, Dexter; secretary, Dr. P. T. Torkelson, Lyle.

CLIFFORD LECK, M. D.
Secretary.

NEWS ITEMS

Dr. E. F. Barrett has moved from Eveleth to Gilbert.

Dr. W. J. Hewson, of Nashwauk, will locate in Adrian.

Dr. L. E. Daugherty, of Eveleth, has moved to St. Paul.

Dr. A. C. Leslie, of Canada, has located at Tagus, N. D.

Dr. Edward Schons has moved from Graceville to St. Paul.

Dr. Clyde Berfield, of Plankinton, S. D., has moved to Toulon, Ill.

Dr. P. G. Reedy, of Chicago, Illinois, has located at Webster, S. D.

Dr. Walter L. Vercoe has moved from Lead, S. D., to Whitewood, S. D.

Dr. Chresten Olsen has moved from Berlin, N. D., to St. Thomas, N. D.

Dr. C. I. Titus, of Minot, N. D., is now located in Great Falls, Montana.

Dr. L. O. Clement, of Lamberton, has sold his practice, and will locate elsewhere.

Dr. F. D. Gray, of Marshall, is putting an operating-room in his hospital at that place.

Dr. T. F. Rodwell has been appointed agency physician at the White Earth Indian Reservation.

Miss Lena Hall has been appointed to fill a vacancy on the Minnesota Board of Examining Nurses.

Dr. H. V. Magnusson, whose removal from Aitkin we have already noted, has located in Kingsbury, Calif.

Dr. F. O. Gronwold, of Adams, N. D., was married last month to Miss Louise Baasen, of New Ulm, Minn.

Dr. A. W. Boslough, of Dwight, N. D., was married last month to Miss Myrtle C. Johnson, of the same place.

Dr. Charles N. Burton has moved from Elmore to Blue Earth and occupies the offices of the late Dr. Franklin.

Dr. L. P. Botsford, a recent homeopathic graduate from a New York college, has located at Valley City, N. D.

Dr. E. M. Larson, of Great Falls, Mont., whose practice Dr. Titus takes, will spend a year or more in study in Europe.

Dr. R. E. Wordworth, of Sioux Falls, S. D., has been appointed superintendent of the State Tuberculosis Sanatorium at Custer.

Dr. Luther A. Rexford, of Minneapolis, has gone to Chicago to spend several months in post-graduate eye, ear, nose, and throat work.

Dr. H. E. French, of the medical department of the University of North Dakota, has moved from Grand Forks, N. D., to Vermillion, S. D.

Dr. H. J. O'Bryan, of Watertown, S. D., will spend the winter in New Orleans, doing post-graduate work in surgery at the New Orleans Polyclinic.

Dr. Albert J. Franklin, of Blue Earth, died last month at the age of 54 years. Dr. Franklin practiced in Minnesota nearly thirty years, and was a highly respected man and physician.

The ladies who compose the Hospital Auxiliary at Montevideo are rejoicing over the posses-

sion of a handsome new ambulance recently bought for the hospital by funds raised by them.

Dr. Clara Hayden, an assistant physician in the St. Peter State Hospital, has resigned, to take up general practice in Iowa. She will be succeeded by Dr. Audry Goss, of Philadelphia.

The new thirteen-story Lowry building in St. Paul, one of the handsomest buildings in the Twin Cities, is occupied very largely by physicians and dentists who are now moving in. It is also the home of the Ramsey County Medical Society.

The churches and fraternal societies of Brookings, S. D., are planning together to raise funds, from year to year, to maintain the Brookings Hospital, which has hitherto been kept up by the physicians at a cost that has become burdensome. The plan is admirable.

The marriage of Dr. Emil C. Robitshek, of Minneapolis, to Miss Leonora Millhauser, of Chicago, occurs today (Nov. 1st) at the Blackstone, Chicago. After a trip to Washington, D. C., and Old Point Comfort, Va., Dr. and Mrs. Robitshek will return to Minneapolis, about Nov. 15th.

Dr. Everett F. Harrington, of Watertown, S. D., died last month. Dr. Harrington was an eclectic physician, and after practicing his profession a number of years became a very successful business man. He was born near Mankato, Minn., and was about fifty years of age at the time of his death.

The body of Dr. John Jackola, the Duluth physician who disappeared in June, was found last month in the woods near the city limits. There is no doubt but that Dr. Jackola committed suicide when his mind was unbalanced. Dr. Jackola was a man of unusual talents, and he had a large practice.

The Minnesota Academy of Ophthalmology and Otolaryngology held its annual meeting last month, but the business part of the meeting was postponed a month, in order to hear an address by Dr. Casey A. Wood, of Chicago. A number of guests were present, and a banquet was given after the address.

Dr. Albert C. Wedge, of Albert Lea, died on Oct. 23d at the age of 77 years. Dr. Wedge had practiced medicine in Albert Lea over fifty years. He had held many positions of trust in the state. He had been a member of both houses of the legislature, collector of internal revenue, mayor of Albert Lea, etc.

The Soo Railway Surgical Association held its fifth annual meeting at Hotel Blackstone, Chicago, on Oct. 16th and 17th. The northwestern men who read papers were Drs. A. J. McCannel, of Minot, N. D.; Dr. Pierre C. Pilon, of Paynesville, Minn.; Dr. Charles A. Stewart, of Duluth; and Dr. John M. Dodd, of Ashland, Wis. Papers were presented by such well-known men as Dr. A. J. Hodgson, of Waukesha, Wis.; Dr. F. Gregory Connell, of Oshkosh, Wis. Dr. John M. Dodson, dean of Rush Medical College; and Dr. George F. Thompson, of the Cook County Hospital, Chicago. Officers were elected as follows: President, Dr. Charles A. Stewart, Duluth; vice-president, Dr. H. J. O'Brien, Superior; secretary-treasurer, Dr. John H. Rishmiller, Minneapolis. Next year's meeting will be held in August at Duluth.

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Cadillac coupe automobile, in perfect condition, new tires and new paint; an ideal car for a physician. Will be sold at a bargain. Address M. S., care of this office.

GOOD OPENING FOR PHYSICIAN

There is a good opening in the south part of Minneapolis for a physician. One half of an office with a long-established dentist is offered for rent cheap at the corner of Lake St. and Bloomington Ave., a carline intersection. Office is modern in all respects. Telephone, Tri-State—Calhoun 2984, or 3852.

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In a good town in western North Dakota. Territory large and country good. I want to sell my house and lot, with the good will of practice thrown in. Good reason for selling. Address C. D., care of this office.

PRACTICE FOR SALE

A practice in a good town, situated on a beautiful lake (a fine summer resort) in a rich farming country, near the Twin Cities. Buy my lake home cheap, and I will move out as soon as I have introduced you. Address A. M., care of this office.

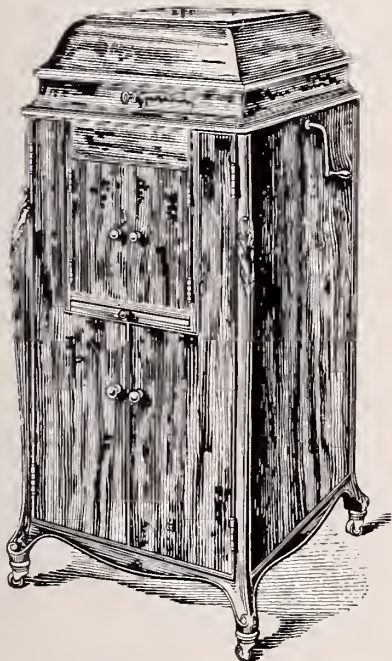
TWO INTERNES WANTED

Two male internes are wanted for a general hospital in Minneapolis. Rotation of service for one year. Address J. M., care of this office.

Doctor: If you want practical post-graduate work during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797, Post-graduate Medical Dept., Tulane University of La.

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PUBLISHER'S DEPARTMENT

THE BUYING POWER OF \$1.75

A little money sometimes buys a good deal. For instance, take the subscription price of *The Youth's Companion* for a year—\$1.75. If all the good reading in the 52 weekly issues of the paper were published in book form, according to its kind, it would make about thirty volumes of fiction, science, essays by famous writers, household management and economies, sports and pastimes for boys, natural history, anecdotes, humor, etc. The serial stories alone would fill several volumes. Among these is Ralph Paine's great story of the Boxer Rebellion in China, "The Cross and the Dragon." Another is by J. W. Schultz, who was adopted by the Blackfeet when a boy. It is called "The Quest for the Fish-Dog Skin." Another is a glorious girls' story by C. A. Stephens, called "Julia Sylvester." It is the story of a "Mercer" girl in the pioneer days of Oregon and Washington—and that is only part of the serials.

It will cost you nothing to send for the beautiful Announcement of *The Companion* for 1912, and we will send with it sample copies of the paper.

Do not forget that the new subscriber for 1912 receives a gift of *The Companion's* Calendar for 1912, lithographed in ten colors and gold, and all the issues for the remaining weeks of 1911 free from the time the subscription is received.

Only \$1.75 now, but on January 1, 1912, the price will be advanced to \$2.00. *The Youth's Companion*, Boston, Mass.

IMPORTANT NEW PREPARATIONS OF PARKE, DAVIS & CO.

General practitioners will be interested in the announcement by Parke, Davis & Co. of two new products of their chemical laboratories. Proposote and Stearosan are the names chosen to designate the preparations in question.

Proposote is creosote in combination with phenylpropionic acid. It is a straw-colored, oily liquid, neutral in reaction, nearly odorless, and having a slightly bitter taste suggestive of creosote. It is insoluble in water, but is slowly decomposed by alkaline liquids. The indications for it are the same as those for creosote. Tubercular cough following pneumonia, the cough of pulmonary tuberculosis, acute and chronic bronchitis, purulent bronchitis, abscess of the lung, asthma, and bronchitis complicated with Bright's disease are among the pathological conditions benefited by its administration. Being insoluble in acid media, it passes through the stomach unaltered by the gastric juice, to be slowly broken up by the alkaline fluids of the small intestine, hence may be given in gradually increasing doses until the desired effect is obtained. During prolonged administration, as is well known, creosote disturbs digestion, impairs the appetite, and often causes nausea and vomiting. Proposote is free from this objection.

Stearosan is santal oil combined with stearic acid. It

is an odorless, tasteless, light-yellow oily liquid that is insoluble in water and dilute acids but is slowly broken up by alkaline fluids. The pathological conditions in which it may be employed with advantage are precisely those in which santal oil has long been used—chronic gonorrhea, cystitis, urethritis, vaginitis, pulmonary disorders such as chronic bronchitis, bronchorrhea, etc. It possesses therapeutic properties fully equal to those of santal oil, over which it has the important advantage of being practically without irritating effect upon the stomach. The explanation of the latter fact is that the preparation is not attacked by the acid gastric juice, but passes into the small intestine, where it is broken up or emulsified by the alkaline fluid and absorbed without difficulty. The distressing eructations and loss of appetite attendant upon the administration of santal oil do not occur when Stearoson is given.

Both Proposote and Stearoson were thoroughly tested clinically before being offered to the medical profession, and practitioners may be assured of their therapeutic efficacy in all cases in which they are indicated. They are supplied in 10-minim elastic gelatin globules, boxes of 25 and 100, and may be obtained through retail druggists generally.

LITERATURE WORTH READING

The value of heat as a therapeutic agent has been so conclusively proven that it will admit of no further argument.

The difference, however, between convective heat in contra-distinction to radiant heat is a subject in which the profession generally is interested.

Convective heat is particularly applicable in cases where radiant heat is not indicated and the reverse is quite true. Their differential thermic value is clearly set forth in the October issue of the *Bloodless Phlebotomist* along with an interesting paper by Mr. David MacIntyre, a Cunard Surgeon, upon "Drugs at Sea."

In the same issue of the *Phlebotomist*, Dr. Edward Parrish, of Brooklyn, presents his methods of treating tic douloureux, and Dr. Leverett, of Yonkers, relates his experience in the successful handling of ivy poisoning cases, which in many instances are quite as intractable to handle as tic douloureux.

In addition to these papers, much other interesting and instructive material is given, and it is worth while to write to The Denver Chemical Mfg. Co., New York, for a copy of the *Bloodless Phlebotomist* for October, which they will send upon request.

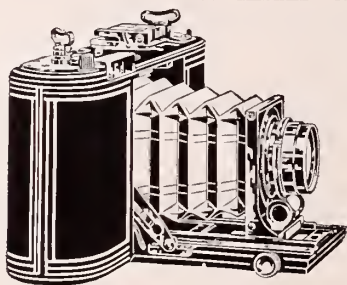
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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, NOVEMBER 15, 1911

No. 22

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL ASSOCIATION

FORTY-THIRD ANNUAL MEETING

1911

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W. L. BEEBE, M. D.....St. Paul

Proceedings

OF

The House of Delegates

FIRST SESSION, WEDNESDAY, OCTOBER 4, 1911

The first session of the House of Delegates was called to order by the President, Dr. J. W. Robertson, of Litchfield, at 2:30 p. m. in the University Room of the St. Paul Hotel, St. Paul.

As the first order of business the chair appointed Dr. Wm. Davis, of St. Paul, and Dr. W. L. Beebe, of St. Cloud, as a Committee on Credentials.

Dr. Davis, on behalf of the Committee on Credentials, submitted the following report:

REPORT OF COMMITTEE ON CREDENTIALS

WM. DAVIS AND W. L. BEEBE

Your Committee has examined the credentials submitted and finds the following entitled to seats as accredited delegates:

DELEGATES	SOCIETY
F. E. Haynes.....	Hennepin County
G. D. Haggard.....	Hennepin County
A. N. Bessesen.....	Hennepin County
J. G. Cross.....	Hennepin County
G. P. Crume.....	Hennepin County
W. A. Jones.....	Hennepin County
J. A. Quinn.....	Ramsey County
Paul Cook.....	Ramsey County
C. R. Ball.....	Ramsey County
Wm. Davls.....	Ramsey County
A. W. Robertson (Alt.).....	Meeker County
Walter Courtney.....	Upper Mississippi
T. L. Chapman.....	St. Louis County
W. E. Harwood.....	St. Louis County
E. H. Bayley.....	Wabasha County
W. J. Hart.....	Mower County
A. D. Ward.....	Lyon-Lincoln
W. L. Beebe.....	Stearns-Benton
E. E. Wells.....	Washington
C. P. Dolan.....	Southwestern
F. H. Alexander.....	Clay-Becker
J. F. Lynn.....	Waseca County
G. S. Wattam.....	Red River Valley
D. M. Strang.....	Rice County
Christian Johnson.....	Kandiyohi-Swift
N. C. Cooney.....	Central Minnesota District
E. H. Beckman.....	Olmsted County
Scott Searles.....	Jackson County
O. S. Werner.....	Chisago-Pine
John Williams (Alt.).....	Blue Earth County
H. A. Schneider.....	Scott-Carver

On motion of Dr. Workman, the report of the Committee was unanimously adopted.

The President: The next in order is the reading of the minutes of the last annual meeting.

The Secretary: The minutes of the last meeting are printed in the Journal of the Association, and have been before all the members, as well as before the House of Delegates. However, I will read them clear through if you so desire.

On motion of Dr. Geo. D. Haggard, the minutes as printed in the Journal were adopted as the minutes of the Association.

The President: The next order of business will be the reports of officers. I will first call for the report of the Treasurer, Dr. Hill.

TREASURER'S REPORT

Dr. R. J. Hill, Treasurer, in account with the Minnesota State Medical Association

1910	Dr.	
		Balance on hand Sept. 30, 1910.....\$2,756.25
Oct. 1	Blue Earth Valley Society.....	3.00
4	Blue Earth Valley Society.....	3.00
4	St. Louis County Society.....	21.00
9	Hennepin County Society.....	3.00
9	Camp Release Society.....	3.00
18	Olmsted County Society.....	3.00
26	St. Louis County Society.....	3.00
Nov. 2	Blue Earth County Society.....	3.00
4	Park Region Society.....	3.00
4	Meeker County Society.....	3.00
5	Hennepin County Society.....	3.00
22	Rice County Society.....	3.00
26	Ramsey County Society.....	3.00
Dec. 2	Red River Valley Society.....	3.00
5	Upper Mississippi Society.....	3.00
10	Hennepin County Society.....	6.00
14	Hennepin County Society.....	3.00
1911		
Jan. 1	Scott-Carver Society.....	3.00
7	Red River Valley Society.....	3.00
Feb. 7	Red River Valley Society.....	3.00
7	Blue Earth County Society.....	3.00
11	Olmsted County Society.....	3.00
Mar. 1	Lyon-Lincoln County Society.....	57.00
5	Scott-Carver Society.....	6.00
7	Jackson County Society.....	30.00
23	Freeborn County Society.....	48.00
23	Stearns-Benton County Society.....	96.00
23	Southwestern Society.....	90.00
23	Wabasha County Society.....	36.00
25	Waseca County Society.....	36.00
25	Nicollet-Le Sueur County Society.....	42.00
Apr. 11	Houston-Fillmore County Society.....	27.00
11	Nicollet-LeSueur County Society.....	3.00
11	Upper Mississippi Society.....	93.00
11	Blue Earth Valley Society.....	39.00
11	Clay-Becker County Society.....	72.00
11	Park Region Society.....	84.00
11	Central Minnesota Society.....	33.00
11	Blue Earth County Society.....	93.00
11	Steele County Society.....	33.00
11	St. Louis County Society.....	300.00
11	Upper Mississippi Society.....	3.00
11	Mower County Society.....	54.00
11	Houston-Fillmore County Society.....	9.00
11	Winona County Society.....	60.00
11	Wright County Society.....	39.00
11	Watsonwan County Society.....	12.00
11	Nicollet-LeSueur County Society.....	3.00
11	Meeker County Society.....	36.00
11	Dodge County Society.....	27.00
11	Camp Release Society.....	129.00
11	McLeod County Society.....	36.00
11	Chisago-Pine County Society.....	39.00
11	Washington County Society.....	42.00
11	Rice County Society.....	66.00
11	Aitkin County Society.....	18.00
11	Goodhue County Society.....	57.00
11	Scott-Carver County Society.....	30.00
11	Brown-Redwood County Society.....	39.00
11	Red River Valley Society.....	93.00
11	Kandiyohi-Swift County Society.....	42.00
11	Hennepin County Society.....	942.00
11	Watsonwan County Society.....	3.00
11	Lyon-Lincoln County Society.....	3.00
11	Hennepin County Society.....	3.00
11	Scott-Carver County Society.....	3.00
11	Blue Earth Valley Society.....	12.00
11	Hennepin County Society.....	6.00
11	Ramsey County Society.....	474.00
11	Olmsted County Society.....	54.00
11	West Central Society.....	60.00

1910	Dr.		
11	Red River Valley Society.....	3.00	
11	Stearns-Benton County Society.....	6.00	
11	Brown-Redwood County Society.....	9.00	
11	Hennepin County Society.....	3.00	
11	Blue Earth Valley Society.....	3.00	
14	Clay-Becker County Society.....	3.00	
14	Hennepin County Society.....	3.00	
14	Olmsted County Society.....	24.00	
14	Camp Release Society.....	3.00	
14	Clay-Becker County Society.....	3.00	
14	Hennepin County Society.....	6.00	
14	Hennepin County Society.....	3.00	
14	Houston-Fillmore County Society.....	3.00	
19	St. Louis County Society.....	3.00	
19	Park Region Society.....	3.00	
19	Ramsey County Society.....	21.00	
19	Hennepin County Society.....	12.00	
19	Brown-Redwood County Society.....	3.00	
22	Houston-Fillmore County Society.....	6.00	
22	Southwestern Society.....	3.00	
22	West Central Society.....	3.00	
22	Ramsey County Society.....	3.00	
May 5	Southwestern Society.....	3.00	
5	Stearns-Benton County Society.....	3.00	
5	Houston-Fillmore County Society.....	6.00	
5	Red River Valley Society.....	6.00	
5	Camp Release Society.....	6.00	
5	Winona County Society.....	3.00	
5	Goodhue County Society.....	3.00	
5	Brown-Redwood County Society.....	6.00	
5	Hennepin County Society.....	3.00	
5	St. Louis County Society.....	9.00	
5	Winona County Society.....	3.00	
5	Houston-Fillmore County Society.....	9.00	
5	Hennepin County Society.....	3.00	
5	Ramsey County Society.....	36.00	
17	Hennepin County Society.....	9.00	
17	Upper Mississippi Society.....	24.00	
17	Red River Valley Society.....	3.00	
17	Brown-Redwood County Society.....	3.00	
17	Park Region Society.....	3.00	
Total receipts.....		\$6,725.25	
Total expenditures.....		2,367.81	
Balance on hand June 10, 1911.....		\$4,357.44	

Dr. R. J. Hill, Treasurer, in account with the Minnesota State Medical Association

1910	Cr.		
Oct. 5	Williamson Regalia Co.....	\$47.20	
7	F. H. Forbes, custodian, Unitarian church.....	30.00	
18	A. G. Long, reporter Annual Meeting.....	75.00	
28	Clara Targeson, stenographer to Secretary.....	20.00	
31	W. A. Jones, President Lancet Co.....	108.35	
28	Brown, Treacy & Sperry Co.....	4.00	
Nov. 9	W. B. Joyce & Co.....	20.00	
9	Security Bank, rent Treasurer's box.....	5.00	
30	W. A. Jones, President Lancet Co.....	110.00	
Dec. 1	Clara Targeson, stenographer to Secretary.....	25.00	
5	Peters & Daly.....	1.50	
10	Long, Wallace & Pendleton, reporters Annual Meeting.....	138.50	
10	Geo. N. Hillman, court reporter.....	39.00	
20	St. Paul Book & Stationery Co.....	2.35	
31	Briggs, Thygeson, Loomis & Everall, attorneys.....	404.97	
31	W. A. Jones, President Lancet Co.....	109.83	
31	Clara Targeson, stenographer to Secretary.....	20.00	

1911	Cr.		
Jan. 11	Thos. McDavitt, expenses Councilors' meeting.....	20.00	
11	W. A. Jones, President Lancet Co.....	109.83	
Feb. 2	Clara Targeson, stenographer to Secretary.....	25.00	
8	Brown, Treacy & Sperry Co.....	.50	
28	W. A. Jones, President Lancet Co.....	109.83	
Mar. 2	Clara Targeson, stenographer to Secretary.....	20.00	
4	American Bonding Co., premium Secretary's bond.....	5.00	
18	500 2c stamped and printed envelopes.....	12.37	
18	Treasurer's book.....	1.25	
25	H. M. Workman, membership dues returned to estate of J. H. Renninger.....	3.00	
Apr. 5	W. A. Jones, President Lancet Co.....	109.83	
5	E. S. Durment, attorney, M. S. M. A. retainer from April 1, 1911.....	100.00	
5	Clara Targeson, stenographer to Secretary.....	20.00	
14	J. J. Catlin, refund dues Dr. J. H. King.....	3.00	
14	Peters & Daly, letterheads, Secretary.....	3.50	

1911	Cr.		
May 4	Clara Targeson, stenographer to Secretary.....	25.00	
4	W. A. Jones, President Lancet Co.....	109.83	
31	Thos. McDavitt, Secretary, salary.....	300.00	
31	R. J. Hill, Treasurer, salary.....	100.00	
June 1	W. A. Jones, President Lancet Co.....	106.67	
1	Clara Targeson, stenographer to Secretary.....	20.00	
1	Luella Fiening, stenographer, annual report.....	2.50	
			\$2,367.81

SUPPLEMENTARY REPORT

Dr. R. J. Hill, Treasurer, in account with the Minnesota State Medical Association

1911	Dr.		
	Balance reported June 1, 1911.....	\$6,725.25	
May 17	Southwestern Society.....	3.00	
June 1	St. Louis County Society.....	9.00	
1	Jackson County Society.....	3.00	
1	Ramsey County Society.....	6.00	
1	Scott-Carver County Society.....	3.00	
1	Hennepin County Society.....	3.00	
1	Lyon-Lincoln County Society.....	3.00	
July 5	Olmsted County Society.....	3.00	
5	St. Louis County Society.....	3.00	
5	Upper Mississippi Valley Society.....	3.00	
5	Hennepin County Society.....	3.00	
8	Ramsey County Society.....	12.00	
8	St. Louis County Society.....	9.00	
14	Hennepin County Society.....	3.00	
14	Blue Earth Valley Society.....	3.00	
19	Park Region Society.....	3.00	
19	Southwestern Society.....	6.00	
Aug. 15	Upper Mississippi Valley Society.....	3.00	
15	Red River Valley Society.....	12.00	
15	Camp Release Society.....	3.00	
Sept. 22	Four coupons, \$20 each, N. P. Ry.....	80.00	
1	Southwestern Society.....	9.00	
1	West Central Society.....	6.00	
1	Camp Release Society.....	3.00	
1	Southwestern Society.....	3.00	
11	Stearns-Benton Society.....	6.00	
11	Scott-Carver Society.....	3.00	
Total receipts Oct. 1, 1911.....		\$6,931.25	
Total expenditures.....		2,807.22	
Balance on hand Oct. 1, 1911.....		\$4,124.03	

Total receipts Oct. 1, 1911.....\$6,931.25
Total expenditures.....2,807.22

1911	Cr.		
	Balance reported June 1, 1911.....	\$2,367.81	
July 8	G. W. Cunningham, envelopes Secretary.....	15.75	
8	Clara Targeson, stenographer to Secretary.....	25.00	
7	W. A. Jones, President Lancet Co.....	108.58	
10	Durment, Moore & Sanborn, attorneys for Association.....	20.00	
Aug. 7	Clara Targeson, stenographer to Secretary.....	20.00	
8	W. A. Jones, President Lancet Co.....	108.58	
Sept. 1	Clara Targeson, stenographer to Secretary.....	20.00	
1	W. A. Jones, President Lancet Co.....	110.00	
1	Journal State Medical Association, 100 copies roster.....	11.50	
			\$2,807.22

On motion of Dr. James Quinn the report of the Treasurer was accepted and adopted.

Dr. Wm. Davis: I would like to ask if the Council are authorized to invest surplus funds, or if that has to be voted each year. I am asking the question for my own information.

Dr. H. M. Workman: I am going to ask that the Council be authorized to do so.

The President: The next order of business will be the report of the Secretary.

SECRETARY'S REPORT

THOS. MCDAVITT, M. D., ST. PAUL

The Secretary has to report 1,343 on the roll of membership. No new county societies have been formed during the year. The medical defense feature went into operation April 1, 1910. Since then there

have been six or seven cases presented for defense. In all but one malpractice was claimed as an answer, to try to prevent paying a presented medical bill, and of these all but one were settled as soon as it was evident there would be a fight; one case got into court and was then settled by the patient paying the bill before the taking of evidence was completed. Only one case was a straight claim for damages from malpractice, and this was a dispensary case. In this instance the evidence was all received, and the judge ordered the jury to bring in a verdict for the defendant, as the claim was without the least foundation in fact. The cost to the Association in full for the seventeen or eighteen months has been less than one thousand dollars.

The contract the Council was directed to make with the Lancet Publishing Company, although accepted by said company at the last meeting, was not completed by the company. At their request a full meeting of the Council was held in December, 1910, and, owing to certain representations made by the Lancet Company, the Council instructed that the old contract be carried out until the next meeting of the House of Delegates. This has been done and the matter is now before this meeting of the House of Delegates.

The component societies, most of them, have met with reasonable regularity, and the interest in medical and sanitary matters has been materially increased.

On motion of Dr. Wm. Davis, the report of the Secretary was approved.

The President: We will now have reports from standing committees.

Dr. H. M. Workman: Before the reports of committees are heard I would like to offer a resolution to the effect that the Council be authorized to invest an additional \$1,500 in bonds. I will make that as a motion. We have \$4,000 on hand, and while it is necessary to carry some surplus cash, we would like to have authority to invest another \$1,500 in bonds.

The motion was duly seconded, and, being put to a vote, prevailed unanimously.

The President: I am now going to call for a report of the standing Committee on Public Policy and Legislation, of which Dr. Beebe is chairman.

Dr. W. L. Beebe: I have no report to make at this meeting. It was published in the proceedings; the report of the proceedings of the national committee was published entire in the American Medical Journal.

Dr. F. A. Knights: I wish to give notice of several amendments to the by-laws which have been discussed to some extent in the Council this morning, and which our Secretary has recommended in order to bring the fiscal year in uniformity with the calendar year. We have a fiscal year beginning the first of June, and a roster year beginning the first of April, and many of the

County Societies meet and have their fiscal year beginning January 1st and ending December 31st, and it would seem very desirable to bring our different years together in consonance with the County Societies, and in accordance with the recommendation by the American Medical Association.

Dr. Knights then outlined the proposed amendments to the by-laws, the full text of which appears in later proceedings of the House of Delegates.

The President: Under the constitution these proposed amendments to the by-laws must lie over twenty-four hours before action can be taken upon them.

The Secretary: In cases where members have had lawsuits, very frequently questions have arisen that had to be settled offhand by the Secretary. One case occurred last fall. You will remember, our defense fund did not go into operation until the 1st of April, 1910. About a year ago a lawyer and a doctor from the western part of the state came into the office and wanted the Association defense for this doctor. The case had occurred in August, in either 1908 or 1909, at least eight or nine months before our defense went into effect at all, and knowing how this defense had been evolved and what was desired by the House of Delegates, and knowing also that it was intended to defend only cases of malpractice that had occurred after our defense went into operation, I at once told the doctor and lawyer that the case happened long before our defense went into operation, and that I did not think we were obligated to defend it. The matter was dropped and I heard nothing further in reference to it until sometime this past spring, March or April. In talking over matters with our attorney and getting his advice in reference to a certain matter, I thought I would like to have this feature straightened out, and I therefore got his written opinion on that point. I was very much surprised on receiving that written opinion to find that we were obligated to defend all cases of malpractice, no matter when they were brought, as long as the statute of limitation did not run. Our attorney says that our articles have been so drawn that we are obligated to defend all members against whom suits for malpractice may be brought. Soon after that I received a bill from the doctor; his lawyer had gone ahead and defended the case. In view of the fact that I find we are obligated to defend these suits I would like to have author-

ity given me for the payment of this bill of \$110.35. I would like to have a motion made instructing me to draw a warrant.

On motion of Dr. C. R. Ball the Secretary was instructed to draw a warrant for the amount stated.

Dr. Geo. D. Haggard: A motion was passed along the same line last year, instructing the officers of the Association to defend these suits for one year. That ought to be taken up now, and I want to move that we renew those instructions for the coming year unless some other disposition of the matter is made. The question arose during the meeting of the House of Delegates last year as to whether the amount of one dollar from each member, or, in other words, \$1,300, would be sufficient to defend all possible cases that might come up within the year. Dr. Johnson made a motion that the officers be instructed to defend all suits for one year. That covered but one year and brings us up to the present without instructions to pursue any definite line during the coming year. Now I will renew my motion that this policy be continued during the coming year, unless something different is suggested.

Dr. Paul Cook: If I remember correctly, according to the report of the Secretary, the expense for the purpose named was about one thousand dollars during the past year for defending five or six suits that, apparently, had very little foundation. I believe only one case was carried into court.

The Secretary: It was less than a thousand dollars from the time it was put into operation; it has been in operation a year and a half.

Dr. Paul Cook: Even at that, if we should have two or three suits that had some merit and that required considerable litigation it would leave our fund inadequate to defend all suits.

The Secretary: There was only one case fought out. I would like to state that, under the law, we can not lay aside one dollar of our fees for litigation. We have practically increased our dues one dollar a year for that purpose, but we dare not show it in the minutes, as that would invalidate the whole matter; in that event we would be an insurance organization and would come under the insurance laws. So at the present time we are not supposed to know anything about a dollar being paid into the Society treasury for that particular purpose,—it is simply paid in as dues. The consequence is that such expense has to be paid out of the funds of the

Association, and all the funds of the Association can be used for that purpose if necessary. We have Dick Hill's entire bank account to draw on if occasion demands.

Dr. G. S. Wattam: I would like to ask, for my own information, whether there is anything in our minutes indicating what the dues of this Association are, or what they should be. Do they show that the dues are four dollars a year, or three dollars a year, or are we simply working under the motion made last year adding this one dollar to the dues so it can be used for the purpose of this defense fund?

The Secretary: I would like to state that formerly, before we had our defense fund, our dues were two dollars a year. We started out with the intention of adding one dollar to the annual dues and putting that aside as a defense fund, but our attorneys informed us that all we could do was to increase our dues one dollar, making the dues three dollars, but not having it appear on our minutes what it was to be used for. It could be used to pay the debts of the Society, but it could not be used for the purpose of making an insurance fund of it. We increased our dues to three dollars, and our dues will be three dollars until our by-laws are changed.

Dr. Wm. Davis: There is a motion before the House to renew the motion made last year. I would like to ask the Secretary to read the motion that was made last year.

The Secretary then read the following motion offered by Dr. Christian Johnson at the previous annual meeting of the House of Delegates: "I move the officers of this Association be authorized to defend all malpractice suits entered against members during the coming year. They can make their report to the Association next year and more money can then be appropriated if necessary."

The Secretary: The whole thing is settled by the by-laws.

Dr. G. S. Wattam: I would like to ask the Secretary whether the annual dues of three dollars have been sufficient.

The Secretary: So far they have been.

Dr. G. S. Wattam: Do you think they will continue to be sufficient? I ask the question because I was instructed by my Society to urge an increase of the dues, if necessary, for this purpose.

The Secretary: I do not think that we are going to be troubled about funds unless litigation increases very materially.

The President: That matter is already covered by the by-laws.

Dr. Geo. D. Haggard: I understand there is provision made in the by-laws for this matter, and I therefore withdraw my motion.

The Secretary: I would like to state to the doctor that my remembrance is that Dr. Johnson made this motion after what I stated in reference to one suit that had come up at that time, which was evidently a malpractice claim, made only for the purpose of avoiding the payment of a bill, and I asked instructions of the House of Delegates as to whether we should defend that class of suits and call them malpractice suits. As I remember it, and I think Dr. Johnson will bear me out, that was the cause of his motion. In other words, he instructed the Council to defend all such cases, even where they came as a defense of a bill. Am I correct, Dr. Johnson?

Dr. Christian Johnson: I believe you are correct. There was some question whether we should proceed under such conditions, but it was finally suggested that we try it for one year and see what the result would be.

NEW BUSINESS

The President: I think we have finished all matters of old business, and we are now ready to take up any new business that may present itself.

Dr. W. L. Beebe: Under the head of new business I would like to introduce the following resolution and move its adoption:

RESOLUTION RELATIVE TO TUBERCULOSIS HOSPITALS

"WHEREAS, The total number of hospital beds for tuberculosis in this state is entirely inadequate, judged by the provision made in other communities that are successfully combating the disease; and

"WHEREAS, Such beds as there are are not properly distributed and are, for the most part, unavailable for advanced cases of the disease; and

"WHEREAS, Two years' experience under the County Tuberculosis Sanatorium Act (Chap. 347, Laws of 1909), has shown that the counties cannot, unaided, build the required institutions; therefore,

"BE IT RESOLVED, That an appropriation by the next Legislature of a sufficient amount of money to establish or aid district institutions for all stages of the disease, with an accommodation for not less than four hundred cases, is necessary if the disease is to be controlled; and, be it further

"RESOLVED, That the County Medical Societies be requested to send a copy of these resolutions to the members of the Legislature from their respective counties."

Dr. W. L. Beebe: As a matter of fact very nearly all of this resolution has been passed by

the State Board of Health and by the State Tuberculosis Society, and this is simply to get in line with them.

The motion was then put to a vote and the resolution was unanimously adopted.

The Secretary: I would like to have authority given me to draw vouchers to the Councilors for attending the special meeting that was called here last December. It is just for the actual expenses of that meeting.

On motion of Dr. T. L. Chapman the Secretary was empowered to draw vouchers to cover the expense of Councilors attending the special meeting held last December.

The Secretary: The officers of the 38th International Congress of Applied Chemistry have requested that delegates be sent representing this organization. Do you wish to take any action upon this request?

The President: Since no one makes a motion, I take it for granted that this Association does not care to be represented.

The Secretary: That is evidently the sentiment of the Association.

THE ASSOCIATION JOURNAL

The President: Now, gentlemen, in regard to the official journal of the Association for the ensuing year, what is your wish? We will have to have a contract made for the ensuing year. I shall refer to this matter tomorrow in my annual address, but since we have an abundance of time this afternoon I think we might go ahead and discuss the situation, even if we do not take any definite action in the matter at this time.

Dr. W. A. Jones: I have a statement or a proposition here which I would like to present to the House of Delegates, and I have reduced to writing a statement explanatory of the proposition.

PROPOSITION OFFERED BY THE LANCET PUBLISHING COMPANY

"Minneapolis, October 4, 1911.

"To the Minnesota State Medical Association:

"The Lancet Publishing Company hereby offers to renew its contract with the Association to become the official organ of the Association upon the terms and conditions of such contract, with the following modifications:

"(1) The term of the contract to be for a period of five years from January 1, 1912, with the privilege, on the part of either party, to cancel said contract at any annual meeting of the Association for good cause, and the Lancet Publishing Company hereby pledges itself not to question any cause assigned by the Minnesota State Medical Association for the cancellation of the contract on its part.

"(2) The name of the paper shall be 'The Journal-Lancet' or 'The Northwestern Lancet,' or such other name as the parties hereto may agree upon.

"(3) The approval of the Minnesota State Medical Association of the arrangements made by the Lancet Publishing Company with the North and South Dakota State Medical Associations, as set forth in an editorial in the Journal of the Association of July 15th.

"LANCET PUBLISHING COMPANY,

"By W. A. JONES,

"President."

EXPLANATORY

"To the Minnesota State Medical Association:

"We desire to offer a brief written statement of our reasons for the modification in the form of contract which we now offer to make for another term of years.

"(1) We greatly fear that the business conditions under which the paper is now published may change at any time to so great an extent that the income of the paper will not pay the expense of publication. In such case we wish a way open to lay the matter before the Association for a modification of the contract, which modification, of course, would be an increased subscription price.

"We cannot now see any other cause for the cancellation of, or a change in, the contract by the Lancet Publishing Company; and, therefore, this provision is made on the company's part exclusively for the reason given.

"On the other hand, we wish the Association to be free at any time to cancel the contract, and we have added the condition simply to place the Association upon its guard against hasty action in the cancellation, and for reasons that would not be creditable to the Association as a business body. Our tentative agreements with the North and South Dakota Associations were made with a like provision.

"(2) As stated in the issues of the Journal for January 1 and July 15, 1911, the Lancet Publishing Company must have some protection against the loss of its property, which would inevitably follow the adoption of the name proposed at the last annual meeting of the Association. The present name is so long and awkward that both ourselves and our correspondents have been compelled to adopt a substitute, which has been either the 'Northwestern Lancet,' or the 'Journal-Lancet,' the latter term being used by the editor whenever reference is made in his writings to the paper.

"This matter, which is vital to the company, can be set forth more in detail in an oral statement, which the president of the company is prepared to make at any time.

"(3) As set forth in the above named issues of the Journal, the arrangements with the North and South Dakota Associations are wholly subject to your approval. The arrangement with the North Dakota Association was made after ten years of effort on our part to bring about such a relation, and it was then made wholly upon the initiative and solicitation of the North Dakota Association. The arrangement with the South Dakota Association naturally followed that with the North Dakota Association, and it was simply a renewal with the South Dakota Association of the former

arrangement. We cannot believe that a single member of the Minnesota Association will object to this arrangement which, as we believe, means much for the advancement of the profession in the entire Northwest.

"Respectfully submitted,"

W. A. JONES.

Dr. W. A. Jones: I wish also to offer the following resolution:

"RESOLVED, That the sum of one dollar (\$1.00) be set aside from the annual dues of each member to pay as his subscription to such paper as the Association shall adopt for its journal or official organ, the same to be set aside each year while such paper remains the journal or official organ of the Association."

Now, this resolution is worded so that it will comply with the postal laws. When, as president of the Lancet Publishing Company, I accepted the offer made by the House of Delegates last year, it was without a full knowledge of the postal conditions. We found that in receiving our funds from the Association treasury we were infringing more or less upon the postal regulations, and we found also that any attempt to change the name would mean a new publication, concerning which we would have to go through yards of red tape with the postal authorities, which would cause us a great deal of inconvenience and would require members of the Association to subscribe individually for the Journal. It seems that the postal regulations are such that the Association is not able to pay out of its treasury definite sums for its publication, unless a definite amount of money be set aside and subscribed to individually by members of the Association. In that case it may mean a loss in the number of subscribers we have, but the Lancet Publishing Company is willing to stand that loss and make it good in some other way. This matter was taken up at a special meeting of the Council on December 27th, last year, and we were obliged to seek legal advice in regard to the matter. I wish to move the adoption of the resolution.

The motion was seconded by Dr. J. L. Rotrock.

Dr. Wm. Davis: Before the motion is put to a vote, I wish to submit a proposal and then offer an amendment to that proposal, to substitute for the words "the semimonthly medical periodical now known as 'The Journal of the Minnesota State Medical Association and the Northwestern Lancet,'" the words, "The St. Paul Medical Journal," and to substitute for the words "one dollar" the words "seventy-five cents."

The amendment was seconded by Dr. C. R. Ball.

The proposal is as follows:

PROPOSITION OF THE ST. PAUL MEDICAL JOURNAL

"The St. Paul Medical Journal offers to become the official organ of the Minnesota State Medical Association on the following terms:

"The name of the journal shall be 'The Journal of the Minnesota State Medical Association.' The Minnesota State Medical Association may appoint the editor of the Journal and may censor its advertising pages. The Minnesota State Medical Association shall pay to the business manager of the Journal seventy-five (75) cents per annum for each member of the Association.

"The Journal will print the transactions of the Association, and all papers read at its annual meeting which shall be recommended for publication by the Association, and will send a copy to each member of the Association. All papers shall be type-written. The Minnesota State Medical Association shall have no financial responsibility for, or interest in, the business management of the Journal, which shall remain in its present hands.

(Signed) "WM. DAVIS,

"Secretary, Editing and Publishing Committee, St. Paul Medical Journal."

Dr. W. A. Jones: I would like to offer a suggestion on a point that Dr. Davis is perhaps not familiar with, and that is that no publication can offer a subscription price at less than one-half of its actual subscription price. It is contrary to the laws of the postal department. If the St. Paul Medical Journal wants to come into the field it must offer a price of not less than \$1.25 in order to comply with the postal laws. I think that will settle any amendment of the seventy-five cent order.

Dr. J. L. Rothrock: The Association is committed to no policy whatever. As I understand it, the Councilors were to provide for the publication of the proceedings and the papers according to the provisions of the constitution and the by-laws. They are committed to no policy, and we need not have any official organ whatever. We can go back to the old method of having our proceedings published, or we can start a medical journal of our own if we so desire. It seems to me if we are going to have an official organ we ought, at least, to have the privilege of designating its name. As it is now, and as this resolution of the Northwestern Lancet suggests, we will lose our identity entirely, and it will simply make the Northwestern Lancet our official organ, giving them all the papers to publish, we in return receiving their publication for the price agreed upon. It seems to me if we are going to have an official organ we ought to have the privilege of designating its name, and

we ought to have control of it. I always have been opposed, personally, to having an official organ at all. I have always subscribed for the Lancet and shall continue to do so. I am always glad to have the publishers publish a paper for me, but it seems to me we are putting them in a position which we ought to control ourselves. I personally am opposed to having an official organ at all unless we have the right to designate its name. I would much rather have the Association attempt to run a publication of its own. The Lancet loses more and more of its identity, although it has secured the position it has in publishing our proceedings, yet in publishing the proceedings of other states it is still further losing its identity. I would very much dislike to see the House of Delegates enter upon this contract.

Dr. C. R. Ball: It seems to me as our State Association becomes better organized we will have more need for funds, and we ought to have some means or method that will contribute to those funds. As a member of the Ramsey County Society I want to say that we have had two factors which have been very potential in building up our society and building up its finances: one is the sale of catgut and the other is the proceeds from our medical journal. Although the St. Paul Medical Journal has been the journal of a County Society only, it has been very successful, and it has contributed in the neighborhood of \$800 to \$1,200 a year to the funds of our local Society. Now it seems to me if the State Society had a journal, certain funds could be derived from it, and there would be a considerable income each year which could be used in various ways to increase the effectiveness and power of the Association. I believe with Dr. Rothrock that if we are going to have an official publication it ought to be an official publication, and it ought to belong to the State Medical Association, and if there is any profit to be derived from this publication the profit ought to go to the Association instead of to private individuals. The Association ought not only to have the naming of the publication, but it ought also to have the naming of the editor.

Dr. W. L. Beebe: Inasmuch as our President has told us that he proposes to refer to this subject in his annual address tomorrow, it would be at least an act of courtesy, in my opinion, to defer action until after we hear what he has to say, and I therefore move that we do not take a vote upon this subject at this time, but that action be

postponed until after the President's address. At any rate that will give us more time to think over the matter.

Dr. C. R. Ball: I rise to a point of order, that a motion previous to this is before the House.

Dr. Wm. Davis: Dr. Beebe is entirely in order. He moved to postpone to a definite date and such a motion is always in order.

Dr. C. R. Ball: He can simply make a motion to lay on the table, and such a motion is not debatable.

Dr. Wm. Davis: A motion to postpone to a certain time is debatable and it takes precedence of the original motion.

Dr. W. A. Jones: May I add another word. We are not in a hurry to have this matter settled, and we want it settled amicably or we do not want it settled at all. We come before you with a journal which has done the work of the State Association for some time, and from what we know it has been reasonably acceptable. We thought we would strengthen the State Medical Association by having the journal embrace three states. It is not going to increase our income, and if those men who talk about starting a medical journal should undertake it they would soon realize the difficulty. In the first place I do not believe the State Medical Association of Minnesota can afford to publish a journal that would be a credit to the Association. I know of two or three medical journals in as many states that have had these troubles. The state of Indiana, which has a larger association membership than Minnesota, has had the same trouble. I have figures to show what their income is, and they make \$500 a year which goes to the editor, and he pays an assistant out of that. So the question of starting a medical journal in this State Association ought not to be touched upon. If you want to preserve the dignity of the Association I think you can preserve it with much less expense and in a much better way by following the present policy, because the Lancet is somewhat familiar with the work, as is also the St. Paul Medical Journal. We are willing that the Association should designate the name and cut it short. We have to refer to it frequently in abstracts made from it and we want to make the name concise. We will state under the name "Journal-Lancet" in sufficiently large type the fact that it is the organ of the State Association. The proposition we make to you is a very reasonable and fair one, and I think it is as much to your credit to have a good journal as it is to ours

to make it so. We know some of the troubles that will be encountered, by the experience we have gone through, and I can tell you that there will be many difficulties in the pathway of the Association if it attempts to start a journal of its own.

Dr. C. R. Ball: I would like to ask Dr. Jones why the Ramsey County Society, with a membership of 125, can publish a journal that shows a handsome profit at the end of the year, while the State Medical Association, with over 1,300 members, cannot publish a journal and make a nice profit.

Dr. W. A. Jones: For the reason that you carry advertising matter which we would not carry.

Dr. C. R. Ball: Do you mean to say that we carry advertising matter that is unethical?

Dr. W. A. Jones: Yes, it is, a great deal of it. Don't you know that?

Dr. C. R. Ball: No, I never knew it.

Dr. W. R. Jones: Well, you had better look it over. We have cut out between \$2,500 and \$3,000 worth of advertising since we went into the State Association work, and we have kept a reasonably clean journal; it is a journal that goes all over the country, and we ought to have credit for it.

Dr. Wm. Davis: The question is to postpone this whole matter until we hear the President's address. The discussion should be only as to the time of the postponement, and not on the main question.

The motion offered by Dr. Beebe was then put to a vote and prevailed.

Dr. Wm. Davis: I move that when the House adjourns it meet again on Friday morning at 10 o'clock.

Dr. T. L. Chapman: Is it not possible that a number of members will not be here on Friday morning?

The President: Heretofore at every meeting the House of Delegates has met on Friday morning, Friday being the last day of the meeting. I have been a member of every House of Delegates since the reorganization of the Association, and I know that has always been the practice.

Dr. Christian Johnson: If an amendment is in order as to the time of the meeting I desire to offer one. I move that the House of Delegates meet tomorrow afternoon at two o'clock, that when we adjourn we adjourn to meet tomorrow afternoon, Thursday, at two o'clock. That will give those a chance to go home that have to go

home. However, if there is any hour more convenient than two o'clock I am willing to change my motion. I will offer an amendment to make it five o'clock.

Dr. J. L. Rothrock: Will that meeting take up the question of the publication of the proceedings?

The President: It will under the amendment.

Dr. J. L. Rothrock: Will that prevent the taking up of anything else?

The President: The election of officers is always held at the last meeting of the House of Delegates, and that will take place if we have only one more meeting.

Dr. Christian Johnson: I say, let us settle the question of publication right now while we are here.

Dr. W. L. Beebe: That would necessitate a third meeting for the election of officers; I should certainly be opposed to that. We can have a regular session Friday morning and dispose of both matters at once. It has always been customary to have the election of officers on Friday morning, and I should be very much opposed to a meeting tomorrow afternoon to settle this question and then come back again Friday morning for the purpose of electing officers.

Dr. Christian Johnson: I think a good many would be accommodated that want to go home, and why should we not be accommodated? It is a matter of interest to the delegates to go. I would like to go home tomorrow night myself, in fact, I may have to, and I would like to be here to see the finish of this fight.

Dr. W. A. Jones: This is not a fight and is not going to be a fight. I think the country members ought to stay.

Dr. Wm. Davis: I think the question of the amendment offered by Dr. Johnson is still open. I wish to say that as far as I am concerned I should be glad to come tomorrow afternoon at five o'clock, but it seems to me it is the duty of the country members to stay until Friday when the election of officers comes up, for to my mind that is a much more important matter than the settling of this journal question.

Dr. Christian Johnson: I will make another proposition. Supposing we meet here,—how early can we meet Friday morning? I move we meet here at eight o'clock Friday morning.

The motion was duly seconded, and, being put to a vote, the result was declared a tie.

The President: The chair decides that we meet at nine o'clock. (Laughter.)

Dr. Wm. Davis: I think the original motion is before the House now, and I ask to be permitted to substitute nine o'clock instead of ten.

The motion was then put to a vote and prevailed.

PLACE OF NEXT MEETING

Dr. T. L. Chapman: It is possible I may not be here at the last session, and, therefore, before the House of Delegates adjourns I wish, on behalf of the St. Louis County Society, to extend a cordial invitation to the Association to hold its next annual meeting at Duluth. (Applause.)

On motion of Dr. W. A. Jones the House of Delegates adjourned to meet at nine o'clock on Friday morning, October 6th.

SECOND SESSION

FRIDAY MORNING, OCTOBER 6, 1911

The House of Delegates was called to order by the President at 9 A. M.

Upon motion, the reading of the minutes of the previous meeting was dispensed with, and the House adjourned for one hour, in order to listen to the oration of Dr. Bertran Sippy, of Chicago.

Upon reconvening, a supplementary report of the Committee on Credentials was offered and accepted.

The President: The next order of business will be the election of officers. The first officer to be elected will be your president for the ensuing year. Any nominations?

Dr. Haldor Snévé, of St. Paul, was nominated by Dr. W. A. Jones, and, on motion of Dr. Tomlinson, the Secretary was instructed to cast the ballot of the house. Dr. Snévé was declared duly elected as president for the ensuing year.

Dr. O. T. Sherping, of Fergus Falls, was nominated as first vice-president, and on motion the Secretary was instructed to cast the ballot of the House. Dr. Sherping was declared duly elected first vice-president for the ensuing year.

Dr. W. F. Wilson, of Lake City, was named for the position of second vice-president, and, on motion duly seconded, the Secretary was instructed to cast the ballot of the House. Dr. Wilson was declared duly elected for the ensuing year.

The President: We will now listen to nominations for the office of secretary.

Dr. Tomlinson: I would like to place in nomination the name of Dr. Thos. McDavitt, of St. Paul, for secretary, and I move the President cast the ballot of the House.

Dr. Tomlinson's nomination and motion being duly seconded, the President cast the ballot, and Dr. McDavitt was declared duly elected. (Cries of "Speech, speech!")

Dr. McDavitt: Gentlemen, I thank you.

The President: That is as much of a speech as I ever heard him make.

Nominations having been called for to fill the office of treasurer, Dr. R. J. Hill's name was presented, and, upon motion, the Secretary was instructed to cast the ballot of the House. Dr. Hill was declared duly elected as treasurer for the ensuing year.

The Secretary: Mr. President, there are two Councilors whose terms expire this year: Dr. A. E. Spalding, of the Sixth District, and Dr. A. O. Bjelland, of the Eighth District.

On motion of Dr. Magie, duly seconded, the Secretary was instructed to cast the ballot of the House for Drs. Spalding and Bjelland as Councilors for the ensuing year.

The Secretary: Mr. President, regarding the matter of delegates to the A. M. A., Dr. Geo. D. Head last year was elected for two years. Automatically, he will represent the district next year for one year. Dr. Dugan has been an alternate for one year and in the usual course of procedure Dr. Vander Horck will be the alternate for one year. All that is necessary is to elect a delegate for two years and an alternate for two years.

Dr. Tomlinson: The Minnesota State Medical Association very often is not represented by its delegates, but it is practically always represented by the Secretary, and therefore I believe it would be a good idea to elect him a delegate. I would like to place the name of Dr. McDavitt in nomination as alternate for two years. We shall then be sure to have somebody there who represents us.

Dr. W. A. Jones: I would like to ask if, in the absence of the delegates, we might not have some provision whereby the State will be represented?

The Secretary: Mr. President, having been several times on the committee of credentials of the A. M. A., I find, in looking over its constitution and by-laws, that the only person who can represent a component state association is one elected by the association. No other alternate or no other delegate is admitted, unless some person forces the issue and says that he is elected and gives the proper credentials. Now, at Los Angeles this year, for the first time, this thing was brought up thus definitely. Heretofore,

when any of the executive officers have been present,—for instance, down at Atlantic City, when Dr. Tomlinson was president of this Association,—we had no representative, and they permitted both of us to go into the House of Delegates, representing this State, we being executive officers; but the ruling this year was so stringent that we had only one delegate, although I was present, and of course, if I had been willing to make out the credentials that I was a delegate, they said that they would admit me. I told them that I would not make out any such credentials. Their ruling is as stringent down there as it has been here. I think it is perfectly just, unless they change their by-laws, and I think it would be a very good idea to change ours, so that if the executive officers happen to be present, they can take the place of the elected delegates.

Dr. Tomlinson: I want to supplement something you forgot; that the Secretary and Townsend, who was then the chief fellow down there, said if the president of a state association was present at a meeting and he appointed a member from the State as a delegate, that the House of Delegates would admit him.

The Secretary: They did, but the committee on credentials took the stand this year that they ought to be more stringent, owing to the fact that a good many slipped in under who should not have been there. I think as long as it is a delegated body that the theory is correct. But before we get away from the subject, something should be done with our delegate for two years. It is a place to which Dr. Dugan should be promoted. I move that Dr. Dugan be the delegate for two years.

The motion was seconded, and unanimously carried. Upon motion, duly seconded, Dr. McDavitt was elected alternate for two years.

The Secretary: The next order of business is the question of the publication of the transactions for the ensuing year.

Dr. Davis: The motion that is now before the House of Delegates is the motion made by Dr. Jones; and my amendment, if carried, would make the *St. Paul Medical Journal* the journal of the Association for the ensuing year at any rate, and for as long a time, as I understand, as they make a contract with the Council. I want, first of all, to repudiate what was said by Dr. Johnson here the other day, that this matter of the two journals is any sort of quarrel between two cities or a quarrel between two journals.

I, myself, as editor of the *LANCET* for fifteen years, have claimed considerable share in giving it its present success; but the *St. Paul County Medical Journal* is the journal of my home society, and I make this offer on behalf of its editing and publishing committee. We have offered the journal before, I think, each year as your organ. This year we make you a better offer than we have ever made; i.e., to turn the journal over to you as your journal, with the name only of the Journal of the Minnesota State Medical Association; the Association to elect its own editor; the Association to control the advertisements; the publication of the journal to remain in the hands of the editing and publishing committee of the Ramsey County Medical Society; and we offer this at the price of seventy-five cents a year from each member of the Association.

Dr. Jones, who probably knows more about postal laws than I do, says that we can't do that with our present publication price; but we make this offer and we agree to carry out our offer, whatever cost it entails upon us. We will deliver the journal at seventy-five cents when we say we will, no matter what changes the postal laws require us to make to meet it. We ask you at this time to give us a fair show and to give us consideration, because we are very anxious to publish in our pages valuable contributions that come from this Association.

Dr. W. A. Jones: I want to renew the offer for contract, modified as I suggested in my communication, that the *JOURNAL-LANCET* be the organ of the State Association, as it has been for several years. We have the machinery in good working order. We know about what you need, and we think we can give you better service than anybody else. We can give you a semimonthly service rather than a monthly one; and we will offer the journal at the price of \$1.00. I understand there has been some hesitancy about accepting this for fear that we might raise the price, but you have my guarantee that the price will be a dollar, as it is now.

I want this offer to stand on its merits. We have tried to give, and I think have given, good service in the presentation of the State Association proceedings and its papers, and we propose to do a little better than we have done before and to improve the whole situation.

We have taken in the North and South Dakota Associations with the idea that it would be a helpful plan. It would enlarge the circulation;

it would enlarge the acquaintanceship between the three states, and it would be of mutual benefit to all of the associations. The *JOURNAL-LANCET*, I know, because I am in a position to know, has received a great deal of credit, not only in this state but in many states. It is well and favorably known, and it is known because it is gotten up in good shape, and it is typographically as near right as we can make it.—of course we have occasional slips,—and we believe we are entitled to a renewal of the contract on the merits of the journal and the facilities which we give the State Association for the publication of its proceedings. I really have a personal pride in this matter, I must confess. I have no commercial interest in it, and I feel personally that if this thing is continued it will be a great source of gratification and I think will be a source of gratification to the State Association as well.

A Delegate: May I ask of the gentleman representing the St. Paul publication whether it is proposed in case the contract is awarded in his direction, to issue monthly as heretofore or semi-monthly?

Dr. Davis: Monthly, as heretofore.

The President: The question before the House will be on Dr. Davis's amendment.

A Delegate: I want to ask a little more definitely with regard to the title. I wish the *JOURNAL-LANCET*'s proposition could be read again. I do not know that all of these delegates at this time were delegates at the last meeting. The proposition came up at the last meeting of the House of Delegates in which, at the request of the House Delegates, the name *Lancet* was to be dropped from the title page. A verbal agreement was made at that time to accept under those conditions, and the publishers afterwards found they could not carry out this contract. I want to know now just what they are going to call their journal. I do not exactly understand. Dr. Jones says they will make it the official organ of the Association.

Dr. Jones: The offer was made that the name would be anything that the House of Delegates decided upon. I suggested that the name under which it was now labeled was too long. We hope to call it the *Journal-Lancet*, but, as I said before, we will put in prominent type that it is the official organ of the Minnesota Medical Association, and it will be so understood, and it will be controlled just as the old contract provides, by the Association, which appoints its own publication committee and selects its own editors,

and I shall not be hurt at all if I am not renominated as editor. It is a laborious bit of work, as some may find out if you have an opportunity. But the name will be made as you want it, except that we would appeal to you on economic grounds and for the good looks of the journal and for the convenience of the abstractors and other publications that the name be made shorter. I think you will all like it, and I do not believe you will lose your identity at all. If there are any suggestions that can be made, I would like to entertain them.

A Delegate: Will it also put in prominent type that it is the organ of the North Dakota Association and the South Dakota Association?

Dr. Jones: That will have to come in the journal if you approve of our taking in the North and South Dakota Associations.

A Delegate: Has that not already been done?

Dr. Jones: It has not; we simply ask for your approval.

The Secretary: Has there been any understanding?

Dr. Jones: It is up to the Minnesota Association, and that both the Dakota Associations understood, and that we might not be able to go on with them.

The Secretary: If on account of the stringency of the postal laws, the Lancet was unable to change it last year, how can the Lancet change it this year, or how can the St. Paul Journal change their name?

Dr. Jones: We neither of us can make any change unless we make some provision for change of the payment from members. We cannot alter the name without re-entering the post-office department; but we can alter the name and ask you as a body to set aside a certain part of your revenues; by definite slips, which would be signed voluntarily by individual members of the State Association, so that they may subscribe or they may not. Some of them may want to drop it out. But in order to conform to the postal laws under a change of name we will have to ask that this be done.

The Secretary: This is a resolution to which there is an amendment. The amendment being voted positively, it necessarily carries the resolution with it. I would like to make the suggestion that previous to voting on this matter the House of Delegates definitely and distinctly understand that either journal gives it the name of the *Journal of the Minnesota State Medical Journal*, or such title as the Council may direct,

indicating that it is the journal of the State Medical Association.

Dr. Jones: That I think ought to be done.

Dr. Davis: Is that a motion?

The Secretary: No, it is just an addition before we vote, that whichever journal is voted on the understanding is that the title of that journal shall be the *Journal of the Minnesota State Medical Association*, or such other title as the Council may agree upon.

Dr. Davis: I tried to make it clear on behalf of the St. Paul Journal that this is exactly what we intended.

The Secretary: I understood that, but I wanted it conclusive so that we will all understand what we are voting on.

Dr. Jones: We will make that clear enough and put it in big enough type, but I believe that the paper would look better and would act better if we had a little shorter name, by which we could nick-name it, as it were; but if you want this name preserved, we will have to go through some formula, or simply ask you to subscribe for it individually. We are not going to raise the price of it, at all events, unless you reject our offer.

A Delegate: Isn't the proposition the same one in regard to both journals? Either one now has a title selected by the House of Delegates. If the title is changed, does not the same thing that Dr. Jones provides apply to the *St. Paul Medical Journal*? Is it not a matter of postal-law regulation entirely?

The Secretary: I will withdraw my suggestion, as long as it is understood.

The President: If there is no further discussion, we will vote on the amendment.

Dr. C. R. Ball (St. Paul): May I just say a word? I think before we vote on this resolution there are several things we should take into consideration. In the first place, if the journal for the Ramsey County Medical Association should be accepted on their proposition, there would be a clear saving to the Association of about four hundred and thirty dollars a year. It is not a great deal, but yet it is something that ought to be taken into consideration, because it would more than half pay for the medical defense fund so far.

Then, in regard to tying up to these associations in South Dakota and North Dakota. It is a well-known fact that a medical journal which has to publish all the papers of the Association, in its scientific efficiency is somewhat handi-

capped, because there are many articles which are read at the associations that do not make good literature for medical publication. Now, then, if we tie up to North Dakota and South Dakota and publish all their papers, also publish the papers of the Minnesota Association, the journal that does that will so choke its pages with compulsory literature that it will have no opportunity for selection, and it seems to me that that will be a great handicap, as to some extent it has been a handicap, as you know, to the *Journal of the American Medical Association*. For that reason I think that the idea ought to be clear and distinct in our minds before the vote. I am in favor of our State publishing a journal exclusively for the State, and as to the character of the journal, that does not depend so much on the editor, whoever that may be,—it depends upon the contributions of the members of the Association to the journal. We make our own journal, and we want men that we can point to with pride, that we are proud of, and we can not do that if we are going to have the journal choked with contributions that we will be compelled to publish. If perhaps some of us want to publish an article, we have got to wait then six months or a year. The article becomes old before we can find opportunity to publish it, because the papers read at the State Associations necessarily must take first precedence. I think this is a very important thing. We want our own medical journal, and we want to stand or fall by it and be responsible alone for its reputation and scientific character.

Dr. Jones: I would like to say that the handicap that Dr. Ball fears is not to be considered. In the first place, we can publish all the Minnesota papers in six months and all the papers of the three in nine months; but we inject papers from outside from other societies, and string these papers along. But if you want this thing rushed, without being choked to death, we can do it for you. The question of getting and running a medical journal is up to the State Association now. You can do as you please with it. We have given you that opportunity several years. It is not child's play to publish a medical journal and to introduce a new medical journal and begin all over again means a great deal of difficulty and a great deal of unrest.

Dr. Tomlinson: Without regard to either of these publications, I would like to say that I do not believe Dr. Ball meant all that he said by his remarks. The future of this Association de-

pends upon its young men. If we do not encourage these young men by publishing their papers, we are not going to have any to publish. Our young men who are coming up to take our places should certainly have a place and an opportunity to be heard.

Dr. Ball: That was not my point at all. The point was, we would not have the opportunity of selection in our papers. I think that our young men publish sometimes as good papers as the old men. What we want is originality.

Dr. Magie: From what I have heard from year to year concerning the publication of the journal, it has resolved itself into whether we want one journal to represent this Association or the other. There is no question in my mind but that both of these institutions are perfectly capable of publishing our transactions. The only question in my mind is the choice between the journals. One is represented by an institution that publishes a journal for profit; the other is represented by an institution, a body of men, who are publishing a journal on scientific principles alone; it has no capital stock, I understand. Which do we want? One offers us the exclusive right to this journal as an official journal. There will not be any other states tacked onto it in this proposition. The other offers us a proposition to participate with three other states in selecting its journal for our official organ. There is all there is to it. I like Dr. Jones and Mr. Klein. They are good men to publish journals, but is it to our advantage to have an exclusive journal or to have a journal representing three states? That is the question that I think we should solve here. There should not be any personal affair about it. We are here to represent the Association of the State of Minnesota, not with the idea that we are going to pull this man's chestnuts out of the fire or that man's, but to transact this business in the way that we are sure is to the best interests of this Association. If we think the *JOURNAL-LANCET* is the proper journal, will offer us the most, well and good; if the *St. Paul Journal* offers the most, well and good. Let us decide upon its merits, not upon the fact that one is published in one city or one in the other.

A Delegate: I am a little bit in doubt about this matter of the Dakota Associations. Dr. Jones, as I understand him, says that we may have these Associations included with the publication and we may not. Who is to control that? Is that up to the Council or the House of Dele-

gates whether we will allow the other States to participate in the journal, and, if so, can we not settle that matter? I understand that is not a cast-iron thing, that they have no definite agreement, but possibly my understanding is not correct.

Dr. Jones: As a matter of fact, we have only a provisional agreement that if the State of Minnesota will permit us we will take in the other two States, and we might graduate our type, if you so please; put the State of Minnesota in a little larger type and the other States in correspondingly smaller type, indicating the number of members. Of course, the other Associations are small. The character of the article may be put in graduated type, too, if you want it. These South Dakota and North Dakota men are mighty good fellows, and they write some mighty good papers, and they have not had a chance to be heard yet, and if you journey up to their meetings and hear them read papers you would be quite impressed. They do the same as we do in Minnesota: invite outsiders to come in and fill up the program, and they are educated men. Of course, the publication committee will do just as Dr. Ball wants them to do, i. e., eliminate worthless articles. We have to do that here. The publication committee is sometimes called upon to decide whether the article shall be published or not, and the editor is frequently called upon to decide whether a paper is admissible, and not infrequently, to his discomfort, he has to turn it down.

Dr. Ball: I think Dr. Magie made a very good point; that we ought to take into consideration in voting on this matter that one of the journals is not published purely for profit. It seems to me that this idea of taking on North and South Dakota and Montana Associations was not with the idea of raising the character of the journal so far as its scientific part was concerned, but more for the purpose of increasing the profit through the advertising. I want to say that the *St. Paul Medical Journal* is published exclusively by medical men, both editorially and business managership. The only benefit that Ramsey County gets out of that journal is through the medium of periodicals and the books they receive for book-reviews. It is a benefit, not only to the medical society, but to any physician in the state who wishes to go to St. Paul and look up any article. We have on file in the library almost all of the medical journals in the country, not only

of the present, but of the past years in bound volumes.

A Delegate: I have no axe to grind in this matter whatever, but it seems to me that it all hinges upon a good understanding of what we are going to vote upon. The profit has been spoken of, giving quite a profit each year, and that that might be called an asset to the State Association. It seems to me that it is an impossibility for either journal to give a profit to anybody unless we lean to the commercial side. If our Council has decided upon advertising, we are still in the same position. It depends altogether upon the amount of it that the journal itself has which will give a profit, and what the amount of that profit will be. If the JOURNAL-LANCET has the publication, a more extensive circulation will enable them to make a bigger profit. That is, I assume they will have a bigger circulation in the three states. Whether we accept North and South Dakota is purely optional. It is up to this Association to decide that.

Another very important thing, it seems to me, is regarding the cost to individuals. One offers at seventy-five cents; the other at a dollar. That is an important consideration; but we should also consider that one of these journals we would receive twice a month; the other we would receive once a month; that is, twice a month at a dollar a year and once a month at seventy-five cents. It certainly is a greater advantage to us to receive a journal twice a month than once a month.

It seems to me one of the very important things is to have a good understanding of the resolution and the amendment before we vote upon it. It is largely left to the House of Delegates or the Council to decide how our journal shall be run.

A Delegate: I believe some time ago a statement was made that it was under a decided understanding that in any case the journal selected by this House of Delegates was to be exclusively the journal of the Minnesota Medical Association. Was not that so understood?

The Secretary: The title should show. No hyphenated title.

A Delegate: I think that the House of Delegates are ready to vote upon this proposition.

Dr. Ball: What is the original motion? Before you vote on the amendment I would like to hear the original motion.

The Secretary: The minutes of the Associ-

ation will show that Dr. Jones presented the following offer:

(Dr. Jones' offer was read.)

I would like to ask before the House votes on this motion in reference to the abrogation of the contract. If you vote on this motion, we have no contract; we have none now, in fact. This just makes each journal the Association journal; there is no provision made for the State Medical Association. Are we to understand that the abrogated contract will be the basis of the new contract?

Dr. Jones: We expect that the old contract which we originally presented to you, with the modifications which I think you have, would be the basis for the new contract.

The Secretary: As I understand it, these modifications that were spoken of yesterday by Dr. Jones, have been overturned absolutely; that we do not propose under any circumstances to vote this Association over to this journal and have them tell us what they are going to do. They have a perfect right to say what they will do before the contract is placed before us, but if we have to accept the position that they have assumed in reference to the other State Associations before we vote upon it and it is understood by them that we have accepted them, we want to understand it clearly. I have no feeling in the matter, but I want it fully understood so that there shall be no misunderstanding hereafter and that there shall be no meeting of the Council to say that the contract has not been fulfilled and they do not propose to fulfill it. I want to know where we stand and if we can depend upon it.

Dr. Jones: I think you can depend upon anything we tell you we are going to do. The question of business is an important one, and the question of advertising is equally important. If you would notice, the character of the advertising in all medical journals has changed very materially. It will wipe out all of the profits if you eliminate some of the advertising matter. Our advertising will be such as will be clean and decent and subject to your approval. The income from the journal pays for its publication and the expense of the publishers; there is no profit in medical journalism. If you think there is, try it. The question of association with North and South Dakota is subject wholly to your approval. That is understood. But we look to you hopefully and trust that you will be willing to associate with two other states. I do not see that you are tying yourselves down. The con-

tract is very open and liberal, and it is not going to subject you to any despotism at all.

I wish the whole thing was over with, because it is a subject of constant annoyance to come here and ask favors for a medical journal, and it is the last time that I shall do it.

The offer, too, we make is that you may cancel your contract at any time you please. The Lancet Publishing Co. is owned by eight doctors and the publisher, so that it is not entirely a money-making institution, as Dr. Ball so fears.

As regards the name and details, I hope that will be left to the Council, because I think they have a better understanding of the situation than the House of Delegates.

Dr. Davis: To show you how little rivalry there is between the two cities, I am going to ask the House of Delegates to let Mr. Klein, publisher of the LANCET, speak. He can put the situation, the business side of the LANCET, before you.

A Delegate: It seems to me that we as delegates are losing sight of one point. We are elected here to serve the Minnesota State Medical Association. We are taking up for consideration the publication of the proceedings of this Association. We should not look upon this matter as subscribing for one magazine or another magazine. We are to vote on this question in the interests of the Minnesota State Medical Association. Shall we expend four hundred dollars more than is our right to publish the proceedings of this Association? I have the greatest respect for the gentlemen on both papers, and that ought not to enter into the consideration. We are here to serve the Minnesota State Medical Association and not individual members of this Association.

A Delegate: I think we have but two propositions really to vote upon and act upon at this time; that is the settlement of which of the journals the House of Delegates shall have. I believe that all of the rest of the business as to how the journal should be controlled, with regard to contract, and everything else, should be attended to by the Council. I do not believe we have time to do all of this work. I think it is merely a question of determining which shall be the official publication. I therefore move you that we proceed to ballot on the question.

The Secretary: The motion before the House is this resolution and the amendment is to be voted on first. I do not know how we are going

to get around to take a ballot on a motion of that kind.

Dr. Davis: Just a show of hands.

The Secretary: A vote of ayes on this amendment will select the *St. Paul Medical Journal*. You will then have to vote afterwards upon the original resolution.

Dr. Ball: It is a very important thing, and I would like to suggest that this be a written ballot as getting the sentiment of the delegates better—proceed by written ballot.

Dr. Jones: That is not fair. Show your hands. (Cries of "Question; show your hands.")

The President: We will vote on the amendment. All those in favor of the amendment as read by the Secretary will please say aye.

After a vote in the affirmative, the President called for the negative.

The President: The chair is in doubt.

Dr. Ball: There was a motion before the House that we take a written ballot on the question.

The President: There was a motion and amendment before the House previous to that.

The President then called for a rising vote, which resulted in sixteen votes for the affirmative and eighteen in the negative, whereupon the amendment was declared lost.

A vote was then taken on the original resolution, resulting in twenty-three votes in the affirmative and eleven opposing, and the resolution was declared adopted.

Dr. Jones: I would like to express my thanks to Dr. Davis for his able support in this matter (laughter) and my appreciation to the members of the House of Delegates. We will try and do the best we can for you.

Dr. Davis: It gives me great pleasure to support Dr. Jones after we have lost. I move that the JOURNAL-LANCET, or whatever its name is going to be this year, be allowed to become the official organ of the North and South Dakota State Medical Associations.

The motion offered by Dr. Davis having been duly seconded, a vote was called for, resulting in sixteen in the affirmative and seven opposed. The motion was declared carried.

Dr. Jones: I had something else in mind, and that was this: As president of the Lancet Publishing Co., and as its editor, I would like to ask the *St. Paul Medical Journal* to join us in the publication of one journal.

The Secretary: The next order of business is a vote on the proposed amendments to the by-

laws as proposed by Dr. Knights. They are as follows:

"RESOLVED, That the following amendments be made in the By-Laws: An amendment to Sec. 3, Chap. VI. of the By-Laws by repealing the words of the first sentence "in the sum of \$3,000", and adding in their place "in such sum as the Council may require"; also by adding as the last sentence of said Sec. 3, Chap. VI., of the By-Laws, the words, "The fiscal year shall end on the 31st day of December in each year." Also by repealing the words "before April 1st" in Sec. 11, Chap. IX. of the By-Laws, and adding "before December 31st in each year." Also by repealing the words "the last day of March of each year" and adding "the last day of December of each year" in Sec. 6, Chap. XI. of the By-Laws. Also by repealing the words "March 31" in Sec. 3, Chap. XI., and adding "December 31." Also by putting the words "December 31" wherever any date need appear in the By-Laws as indicating the termination of the fiscal, roster, or Association year."

A Delegate: There is one portion of the amendment that I wish to discuss, and that is in regard to making a change in the society year. When our society, the Red River Valley, was organized we had our year begin and end the first day of January, making our election in October. At the request of the Secretary of the State Association and the House of Delegates we changed it. Our year now begins the first of April. I believe if we make another change the majority of the societies of this State will have to put themselves out to rearrange their programs all the way through. I cannot see where the object is in doing this.

The Secretary: The object is this: When our Association was organized we were meeting in June, and the society was reorganized and the by-laws were passed in the expectation that we would probably continue to meet in June, as we had done for so many years. Consequently, the roster year was made a couple of months before, so that we would have our roster completed and would know something about where we stood at that time. Since that time we have changed our yearly meeting to October. This is a plan to try and get all associations to change their year to correspond with the calendar year, as a perfection of detail of management in all of the associations, and also on the advice of the American Medical Association. There was a committee appointed at one of the meetings of the American Medical Association three or four years ago, of which I was made chairman, in reference to the regulation of membership. There is scarcely a month that some State does not have its fiscal year or its association year end, so that some men

are members of that association from January to January, and then the next association from February to February, and so on all through the year. As you can understand, with thirty or forty thousand members, it is almost impossible for the secretary of the A. M. A., as long as the membership in that association depends upon the membership in the state associations, to know at any one time where they stand. The consequence is, that there is an effort on the part of the A. M. A. to have all of the state associations make their fiscal year the calendar year, so that everything will correspond, and it will be an easy detail of management. It is no trouble to us at all. We could just as well have one year as another. If we can assist in the detail of the management down there by decreasing the cost by ten or fifteen thousand dollars,—by actual count it costs eight, ten, or twelve thousand dollars,—we could not figure it up accurately,—to have this mere matter of count, a perfection of detail, going on all the time, and it will not be any great inconvenience to any of the societies. We are going to advise every county society to change its year. They do not have to do it if they do not want to.

On motion, duly seconded, the amendments to the by-laws as offered were unanimously adopted.

Dr. Jones: I wonder if it would be wise to introduce a resolution asking that no member of the Minnesota State Medical Association introduce a bill into the legislature without the approval of the legislative committee. I offer that as a motion.

A Delegate: Do you mean any bill or just a bill on medical subjects?

Dr. Jones: Just a bill on medical subjects, of course.

Dr. Jones' motion, having been duly seconded, was put to a vote and unanimously carried.

The President: We have not fixed a place of meeting for next year. We have an invitation from Duluth.

A Delegate: Since we have no other invitation, I move that the invitation from Duluth be accepted.

The Secretary: I move that it be the first Thursday and Friday in October, or that it be left in the hands of the Council to fix the date.

On being put to vote, the invitation from Du-

luth was accepted, with the understanding that the date is to be fixed by the Council.

On motion the House of Delegates adjourned.

SPECIAL SESSION

FRIDAY AFTERNOON, OCTOBER 6, 1911

A called meeting of the House of Delegates was held in Ramsey County Society Library rooms on Friday, Oct. 6th, 4:00 p. m. with twenty members, a quorum, present, and Dr. Snévé, the newly elected president, in the chair.

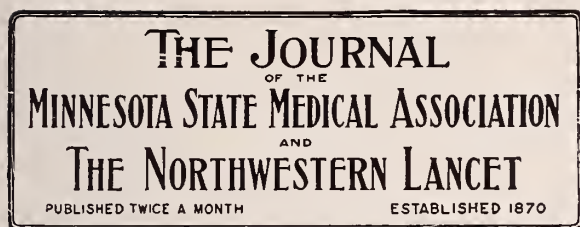
The president thanked the Association for the honor conferred upon him, and called on Dr. Rothrock, clerk of the Council, to read the minutes of the Council, which had met at 2:00 p. m.

Stated in a few words, after much discussion in the Council meeting, the editor and manager of the JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION refused to accept the exclusion of the name "Northwestern Lancet" from the title of the Journal for the ensuing contract. It was moved and seconded that the title be the Journal-Lancet. This was negatived. On motion of Dr. Wm. Davis, it was left with the Publication Committee of the Council to print the Transactions of the Association for the ensuing year in any manner they deemed proper.

On motion, the House of Delegates adjourned.

REPORT OF THE PUBLICATION COMMITTEE

Acting under the special instructions of the House of Delegates the Publication Committee, consisting of Drs. Haldor Snévé, J. L. Rothrock, and Thos. McDavitt, of St. Paul, and Dr. F. A. Knights, of Minneapolis, met November 3d, with all members present, to consider the publication of the proceedings. Dr. W. A. Jones, on behalf of the Lancet Publishing Co., and Dr. Wm. Davis, on behalf of the *St. Paul Medical Journal*, submitted proposals for doing the work. The Committee went into executive session, and after a thorough discussion decided unanimously to accept the offer of the Lancet Publishing Co. to publish the transactions and papers up to Dec. 31, 1912. Thus the Journal will be sent to all members as in the past.



W. A. JONES, M. D.,
EDITOR

W. L. KLEIN,
PUBLISHER

PUBLICATION COMMITTEE OF THE COUNCIL
THOS. McDAVITT, M. D. J. L. ROTHROCK, M. D.
St. Paul St. Paul

F. A. KNIGHTS, M. D.
Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR
Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

MINNEAPOLIS, NOVEMBER 15, 1911

THE CHANGED ATTITUDE OF THE SURGEON IN POST-OPERATIVE CASES

The routine management of the patient who is to be operated on is evidently undergoing a decided change. Many of the old-time ideas are giving way to new methods that mean comfort and safety to the patient.

Dr. S. T. Pope in the *Journal of the American Medical Association* for October 21st, in an article entitled "Empiricism and Pharmacology in the Management of Post-operative Cases," shows the wisdom in adopting new ideas and discarding old ones. He quotes the complaint of a patient who said she did not mind the operation, but, if she had to be scrubbed as she was and to go without water for three days, as she did, she would rather die than submit again to such an experience!

A common method, yet in use, is to starve the patient and purge the intestinal tube before an operation. The fear of the operator that some food may remain in the bowels and develop a toxemia is not now looked upon with concern. The man who has to take an anesthetic and then have his abdomen opened, if deprived of water for from twenty-four to seventy-two hours, is a real sufferer, whereas, if the digestive organs are left in their normal condition, there is less danger from acidosis than when the patient is starved and physicked. Dr. Pope believes that

in place of giving beef-tea or malted milk when vomiting comes on after an operation, the surgeon should give carbohydrates, such as baked potatoes, cornstarch pudding, and mush.

Acetonuria occurs in 88.5 per cent of anesthetics when the cone-method is employed, but in only 22 per cent of the cases where the drop-method is employed. The administration of sodium bicarbonate in water after anesthesia may produce a good lavage, and if retained it forestalls acid intoxication.

Catharsis is usually contra-indicated before the majority of operations, as it not infrequently induces a flat muscleless bowel and thereby tends to bring about an intoxication, the one thing that is to be avoided.

Toxic absorption without the presence of a definite infection does not result from intestinal stasis. If infection is present there is usually a diarrhea. "Strasburger has shown that the bacterial content of the bowel is about 60 per cent of the dried residue, and that in constipation this is reduced, while in diarrhea or after purgation the percentage of bacteria is increased."

The bowel should be put in the best possible condition and approaching the normal by restricted diet, low in proteids and devoid of uncooked foods. An enema the morning of the operation is sufficient to relieve the colon, and Nature will look after the bowel contents without interference except in extraordinary cases.

Pope advocates the use of morphine to lessen pain, shock, and post-operative ileus. It may produce a moderate degree of constipation, but "it masks nothing from the discerning eye; it fools only the foolish." He says, further, that 1 dram of alum to a pint of water is of some service and is better than any other enema.

In the treatment of tympanitis and hiccough carminatives are wholly useless, but lavage and a hypodermic of eserine, pushed to its physiologic limit, is beneficial. "To employ nitroglycerine, digitaline, strychnine, ether, whisky, musk, and camphorated oil indifferently with an idea of helping a patient who is suffering from surgical shock, is simply shocking * * * *, and to stimulate an already exhausted vasomotor center with an excitant like strychnine or a vasodilator like nitroglycerine is comic medicine."

Salt solution, or a combination of sodium chloride and potassium chloride, is most needful.

Time is the cure for simple collapse, and the vascular balance returns unaided and unimpeded by medication.

Hexamethylenamin is urged as a remedy against a post-operative cystitis, infection of the meninges, gall-bladder, and serous cavities, post-partum states when surgical intervention is demanded.

It is probably true that the medical side of the patient is often overlooked by the surgeon, particularly when a surgical clinic is large and when insufficient time is given to individual cases. Doubtless many senseless drugs are given without thought of what the result will be. In the more modern hospitals under better surgical influences the patient is given the best of attention, but not infrequently the details of after-treatment are left to the inexperienced. The surgeon is apt to consider his work done when the operating-table is vacated, and the medical man is inclined to use too many drugs indiscriminately, while the poor patient suffers the consequences.

Dr. Pope's article is a timely suggestion and contains many wholesome hints.

THE NEW HEALTH PROBLEMS

THE JOURNAL-LANCET is soon to begin a series of articles that will be educational in its best sense. It may seem like a radical departure to many of our readers, but these problems have been under discussion by celebrated sanitarians for some years, and we hope to present the newer aspects of them.

An effort must be made to interest the people generally and those who represent the people specifically. A campaign for public health is of the greatest importance, and we respectfully ask our medical men to see that the country papers abstract items from these carefully prepared articles. They have been submitted to health officers, sanitary engineers, and others who are in touch with health problems. The only way that these ideas can gain circulation is through the physician to his patients and particularly through those who are politically ambitious.

Every man who seeks a municipal or state office should be able to declare himself in favor of a measure which conserves the health of his constituents, and if the city and country medical man will see that literature is available to his political representative in order that he may discuss the subject from an intelligent standpoint, it will be possible to secure health laws that will be helpful and not burdensome.

It is not fair for a county or district to send a representative to the legislature or to congress who is not familiar with ordinary public health

needs. The fault lies mainly with the doctors in failing to give expert advice and instruction privately and publicly, and it is no breach of ethics to urge and invite discussion of questions which are of vital importance.

No medical man should seek public office who is opposed to common-sense health rules, and no man should carry his personal animosities into the halls of legislation. All individual differences should be cast aside when the needs of the people are at stake. Will every medical man do his duty in disseminating information that is valuable and helpful for his community?

REPORTS OF SOCIETIES

THE MINNESOTA ACADEMY OF MEDICINE

OCTOBER MEETING

The Academy held its annual meeting at the Town and Country Club, October 4th.

There were forty-five members and three guests present. Dinner was served at 7 o'clock, and the meeting was called to order at 8:20.

The election of officers was then taken up and resulted as follows:

President, Dr. John L. Rothrock; Vice-president, Dr. H. T. Nippert; Secretary-Treasurer, Dr. A. W. Dunning; Executive Committee, Dr. Warren A. Dennis, Dr. C. M. Carlaw, Dr. J. T. Christison.

Dr. Little exhibited a specimen of a gall-bladder removed intact and presented in the preserving fluid. There is a large gall-stone impacted in the cystic duct. The case was that of a woman who was operated on for the removal of the appendix and one ovary. Upon exploring the upper abdomen, however, the distended gall-bladder was discovered and removed, as stated, although there had been no history indicating the passage of small gall-stones.

Dr. H. P. Ritchie reported a case of dislocation of the elbow in a man twenty-five years of age, caused by a fall from a car. The dislocation had been reduced by a local attendant, but three weeks later the man had come under observation, when it was found that he had a lateral dislocation of the head of the ulna, and the joint was double its normal width. As a result the man had no pull, and was unable to carry more than one pound weight. Even though it had been three weeks since the injury

he had successfully reduced the dislocation and with excellent result.

Dr. H. B. Sweetzer reported having operated on a young woman two months after child-birth for trouble with the left kidney. A large mass had been found in the middle line on the left side. He had catheterized the ureters and found clear urine on the right side, but from the left pure pus. When removed, the left kidney was almost as large as a baby's head and was full of pus and cheesy matter, which had plugged the ureter. Within the first twenty-four hours the patient had passed 100 ounces of urine of low specific gravity.

Dr. Walter Courtney, of Brainerd, reported a case of ruptured appendiceal abscess in a man who had shown no symptoms prior to the time of the rupture. Operation was made through a median incision. Pus from the ruptured abscess was found everywhere. Upon exploration it was found that the man had a distended and tender gall-bladder, and to the left a circular mass, which proved to be an ulcer of the ileum; and yet, as stated above, the man had been a hard worker right up to the time of the rupture of the abscess.

Dr. Tomlinson, of St. Peter, reported a case of carcinoma of the stomach which had come under his observation in the State Hospital. Nearly one-half of the walls of the stomach was involved in the process. It had begun at the cardiac end and extended downward. In spite of all this, the man had shown no positive symptoms. The doctor concludes that when the stomach is gradually put out of business the small intestine vicariously assumes its functions.

Dr. Wright cited an instance in which the operation for appendicitis was made, and incidentally it was discovered that the man had a large carcinoma of the colon. The latter, however, had apparently given rise to no symptoms.

Dr. Tomlinson then read the paper of the evening, entitled: "The Rôle of the Nervous System as Affecting the Symptomatology of Disease, and the Influence of Disturbance in its Functions on Morbidity."

The subject was discussed by Drs. Snévé and H. W. Jones.

NOVEMBER MEETING

The Academy met on Nov. 1st, at the Town and Country Club, with twenty-three members present.

Dr. Moore reported the successful use of the

Mostig-Moorhoof bone-wax in a cavity that was neither dry nor aseptic.

Dr. Stewart reported the case of a patient subjected to the same treatment.

Dr. Corbett exhibited an apparatus for holding threaded needles.

Dr. Staples reported three cases of syphilis of the liver.

Dr. Leavitt reported the successful delivery of a living child by the operation of pubiotomy, with the excellent recovery of the mother.

Dr. Armstrong reported the case of a patient infected with the *sporotrichum schenckii*.

The President, Dr. J. L. Rothrock, read his address, entitled "Etiology and Pathology of Chronic Metritis." Dr. Rogers being in the chair during the reading.

Discussion by Drs. Abbott, White, and Tomlinson followed.

A. W. DUNNING, M. D., Secretary.

MINNESOTA NEUROLOGICAL SOCIETY

The Society met at the Town and Country Club, September 28th, with ten members present.

After the business session, Dr. Chas. R. Ball gave a report on the "Cerebrospinal Fluid in Neurologic Diagnosis," with a demonstration of methods employed. Dr. Leo M. Crafts presented a case of hereditary chorea, with the following history:

Mrs. A. J. D., aged 29; married, has had four ascendants: great-grandmother, grandmother, mother, and maternal aunt, all of whom died of some choreiform condition, supposed to have been "St. Vitus dance." All died at about the age of 35, and almost or quite all of them also showed mental deterioration. A sister, now 26, a half-brother at 22, and a maternal cousin at about 28, are now suffering from a progressing choreiform trouble. The half-brother has always been mentally defective.

The patient began to lose in general health about five years ago. During the past four years she has had increasing choreic movements of the face and arms and, to some extent, of the legs. She has also been showing lowered mental capacity, has had difficulty in going up and down stairs, has dropped dishes, etc.

The physical examination showed that the patient is pallid, has a blank expression, thick speech, choreiform movements, of moderate amplitude, of arms, face and legs, more gesticulatory than ordinary choreiform. Slightly stiff

and ataxic in gait. All deep reflexes markedly increased. Babinski on right.

The diagnosis is hereditary (Huntington's) chorea, occurring at an earlier age in succeeding generations.

A. S. HAMILTON, M. D., Secretary.

NEWS ITEMS

Dr. Edward Sungin, of Pierz, has moved to Bovey.

Dr. S. Dulude has moved from Winsted to Bird Island.

Dr. W. M. Beck has moved from Hanley Falls to Clarkfield.

Dr. D. F. Hallenbeck has moved from St. Paul to Goodhue.

Dr. H. J. Shelver has moved from Sheldon, N. D., to Appleton, Minn.

Miles City, Mont., will spend \$25,000 in the enlargement of its city hospital.

Dr. J. L. Anderson has moved from Towner, N. D., to Medicine Lake, Mont.

Dr. J. E. Heatherington, of Grand Forks, has decided to move to Park River, N. D.

Dr. E. R. Fouts has moved from White Sulphur Springs, Montana, to Augusta, in the same state.

Dr. F. H. Alexander, of Barnesville, has moved to St. Paul and has offices at 771 Wabasha street.

The North Dakota Association hopes to get Dr. McCormack for a ten-day campaign early next year.

Fairmont is considering the matter of building a hospital, the need of which is greatly felt by the citizens.

Dr. L. S. Faulkner, who formerly practiced at Pequot, has taken the practice of Dr. Beck at Hanley Falls.

Otter Tail County will probably build a hospital for the care of its tubercular patients. The cost will exceed \$20,000.

Dr. W. A. Meiderding, who was formerly connected with the State Hospital of Fergus Falls, will locate at Springfield.

Dr. E. T. Fitzgerald, of Le Mars, Iowa, has located in Morris. Dr. Fitzgerald is a graduate of Creighton, class of '07.

The Starbuck Hospital Association has been organized at Starbuck for the purpose of building a hospital at that place.

Dr. Frederick O. Gronvold, of Adams, N. D., was married last month to Miss Louise M. Baasen, of New Ulm, Minn.

A number of the churches and fraternal societies of Albert Lea are furnishing rooms in the new hospital, soon to be opened.

Dr. J. A. Freeborn, of Fergus Falls, has gone to Europe for post-graduate work. He will spend most of his time in Vienna.

Dr. N. T. Owen has succeeded Dr. V. W. Spencer at Montrose, S. D. Dr. Spencer retiring from practice and going into business.

Dr. H. J. Rowe, Secretary of the North Dakota Association, attended the annual meeting of the Minnesota Association last month.

Dr. Cleveland V. Frederich, of Springfield, died last month at the age of 27. Dr. Frederich was a graduate of Northwestern, class of 1909.

Dr. George McLain, of Excelsior, died last month at the age of 60 years. He formerly practiced for a number of years at Hillsboro, N. D.

The Minneapolis Board of Education has set aside \$1,500 to meet the additional expense of conducting an open-air school for tubercular pupils.

Miss Lina Holl, of St. Paul, has been appointed by the governor a member of the State Board of Nurses, to succeed Miss Grace Watson, resigned.

Dr. John G. Abbott, of St. Paul, has purchased the practice of Dr. J. A. Hedding, of Hope, N. D. It is reported that Dr. Hedding will move to Minneapolis.

Dr. L. O. Clement, who sold his practice at Lamberton last month, will take a course of post-graduate work in New York and then locate on the Pacific coast.

Dr. Woods Hutchinson, of New York, lectured in a number of Minnesota cities last month. He drew large audiences, and exerted a most wholesome influence.

Dr. G. H. Barksdale has resigned from the staff of the Fabiola Hospital at Eveleth, and after doing post-graduate work in Chicago, will enter general practice.

The city hospital of Jamestown, N. D., had a dangerous fire last month. The patients were

carried by the nurses to adjoining residences, and the fire was put out.

Dr. R. J. Church, of Lankin, N. D., has taken the practice of the late Dr. Halldorson, at Park River, N. D. Dr. Church is a graduate of the State University, class of '95.

Dr. Bartholomew Leahy has located in Perham. Dr. Leahy is a graduate of Toronto, class of '10, and has been connected with St. Joseph's Hospital of St. Paul for some months.

Dr. A. L. Kuske, of Sanborn, has sold his practice to Dr. M. C. Piper, of Mankato, and has moved to Minneapolis. Dr. Piper is a recent graduate of the State University.

Drs. J. S. Barber, J. F. Beck and M. N. Leland will remove their offices from 1525 East Franklin Avenue, Minneapolis, to the new Syndicate block, Sixth and Nicollet, on December 1st.

Dr. Moritz Halldorson, of Park River, N. D., died last month at the age of 56 years. He was a graduate of the Royal University of Copenhagen, and had practiced in Park River over twenty years.

Prof. Ernest B. Hoag, of the University of California, addressed the State Educational Association at Minneapolis last month on school inspection, and with Dr. Bracken, of the State Board of Health, he visited the leading cities of the state and gave addresses.

The types in our last issue moved Dr. H. E. French from the University of North Dakota to the University of South Dakota, while he himself was going the other direction. Dr. French has entered upon his new duties in the Medical Department of the University of North Dakota.

Dr. A. F. Pringle, of Northfield, died at his sister's home in Cornwall, Ont. He left Northfield last spring for a rest and post-graduate work in Paris, Vienna, and London. In London, at the time of the coronation, he was knocked down while riding his wheel and suffered a fracture of the arm. He gradually went down physically and mentally. He was buried Tuesday, Oct. 31. Dr. Pringle graduated at McGill in 1880. He practiced medicine for a time at Northfield, and then studied in the European clinics for some time before returning to Northfield, where he specialized in the eye, ear, nose and throat.

The county and district societies of North Dakota have been urged by the Secretary of the State Association to increase their member-

ship fees in order to raise a fund for medical defense. The report of the success of the Minnesota Association in this line should encourage the Dakota doctors to make effective this measure. The President of the State Association has appointed the following as the Executive Board of Medical Defense: Dr. A. J. McCannel, Minot; Dr. H. H. Healy, Grand Forks; Dr. E. P. Quain, Bismarck; Dr. L. S. Platou, Valley City; and Dr. C. N. Callender, Fargo. This board is to act for one year, and then each local society will elect one member to act with the executive committee.

The death of Dr. A. C. Wedge, of Albert Lea, was noticed briefly in these columns in our last issue. Dr. Stevenson, secretary of the Freeborn County Society, sent the following notice of Dr. Wedge:

Albert Clark Wedge, M. D., a prominent pioneer physician and surgeon of Albert Lea, Minn., died at his home in that city Oct. 23, 1911, from terminal pneumonia; aged 77. He was born in Lewis County, New York, and was graduated from the Ohio Medical College in 1857, coming to Albert Lea the same year, when there were but a few houses here.

In 1862 he was appointed assistant surgeon of the Third Regiment of Minnesota Volunteer Infantry, and was later promoted to surgeon, with the rank of major, and served until the end of the war. While in Albert Lea, Dr. Wedge was active in politics, local, state and national, having served in the state legislature, later as state senator, and as collector of internal revenue under President Garfield. The doctor was actively engaged in practice for nearly fifty years, but retired at the age of 70. He was a member of the American Medical Association, the International Association of Railway Surgeons, the Minnesota State Medical Association, and the Freeborn County Medical Society.

PHYSICIANS LICENSED AT THE JUNE (1911) EXAMINATION TO PRACTICE IN MINNESOTA

UPON EXAMINATION

Boucher, Leger F. X.....	Laval, 1910
Brown, Edgar Dewight.....	Western Reserve, 1902
Buck, Frederick H.....	Toronto, 1910
Christian, Wm. Wright.....	
.....N. Y. Homeo. Med. Col.,	1895
Dedolph, Karl.....	U. of Minnesota, 1911
Dickey, Robert R.....	Hamline, 1909

Dunlop, Harry.....	Queens, 1908
Feidt, Wilson W.....	U. of Pennsylvania, 1899
Gibb, Wm. Blake.....	U. of Toronto, 1908
Haight, Glenn G....	Baltimore Med. Col., 1910
Laird, Arthur T.....	U. of Pennsylvania, 1900
Leahy, Bartholomew.....	Toronto, 1910
Linson, Ivan M.....	Bennett, 1910
Morrill, Ashley B.....	Harvard, 1911
Wagner, Paul S.....	Rush, 1911

BY RECIPROCITY

Arnson, Julius O.	Northwestern,	1911
Baker, Glenn L.	Northwestern,	1911
Baskett, Lindsay W.	U. of Michigan,	1909
Blumenkranz, Louis.	Northwestern,	1910
Breitenbach, Carl A. O. . . .	U. of Michigan,	1903
Brunjes, Dick G.	Hahnemann, Chicago,	1910
Canfield, Harry E.	U. of Minnesota,	1906
Cress, Earl E.	Northwestern,	1910
Eisenman, Walter G.	U. of Michigan,	1909
Fitzgerald, Edward T.	Creighton,	1907
Hanson, Adolph M.	Northwestern,	1911
Hodge, Stanley V.	Northwestern,	1910
Ingerson, Carl A.	Marquette,	1910
Johnson, Norton T.	Northwestern,	1911
Kaufman, William C.	Creighton,	1911
Kennedy, Claude C.	Marquette,	1911
Kennedy, Robert R.	Marquette,	1911
Lande, William B.	Northwestern,	1911
McDowell, John P.	Marquette,	1911
Mussey, Robert D.	The Med. Col. of Ohio,	1908
Nelson, Oscar E.		
.	Col. of Med. & Surg., Chicago,	1910
Palmquist, Nathaniel.	Barnes,	1909
Pesonen, Axel A.	U. of Michigan,	1911
Quammen, Charles G.	Keokuk,	1903
Ripperton, Sherman.	Keokuk,	1905
Taylor, George R.	U. of Michigan,	1910
Wall, Cornelius W.	Northwestern,	1909
Williams, Hugh O.	Marquette,	1911

PRACTICE FOR SALE

An unopposed village and country practice in eastern North Dakota, is offered for sale at a nominal price; has averaged \$2,500 a year for the past five years. Large territory; collections first-class. Scandinavian preferred. Address A. F., care of this office.

PRACTICE FOR SALE

A practice in a good town, situated on a beautiful lake (a fine summer resort) in a rich farming country, near the Twin Cities. Buy my lake home cheap, and I will move out as soon as I have introduced you. Address A. M., care of this office.

PHYSICIAN AND SURGEON WANTED

A physician and surgeon, German or Scandinavian preferred, is wanted. When answering state where graduated and length of time in practice and at what place. Address Joseph E. Fitzgibbons, Box 156, Brad-dock, N. D.

APPARATUS AND OFFICE FIXTURES FOR SALE

On account of dissolution of office partnership we have for sale one 16-in. Western X-Ray Coil, tubes, tube-shield, stands, fluoroscope, high-frequency resonator—in fact everything complete for x-ray work and high-frequency treatment. Cost, over \$550.00; for sale for \$275.00. One Bausch & Lomb microscope with movable stage, as good as new. Cost, \$90.00; for sale for \$55.00. One Nelson vibrator, flexible shaft and fittings, wall bracket, etc. Cost, over \$45.00; for sale for \$25.00. Water centrifuge, Thoma blood-count apparatus; office furniture, etc. We guarantee everything in good working order; can be seen at our office; Drs. Leland & Murphy, 1525 E. Franklin Ave., Minneapolis.

PRACTICE FOR SALE

Practice in the suburbs of one of Twin Cities in Minnesota, together with some real estate, is offered for sale. Has paid over \$3,000 a year for past five years. Will sell real estate much below cost, and throw in good will and most of office equipment. Rent cheap. Will introduce successor. Fine chance to work into city practice. Address N. S., care of this office.

PRACTICE FOR SALE

In a good town in western North Dakota. Territory large and country good. I want to sell my house and lot, with the good will of practice thrown in. Good reason for selling. Address C. D., care of this office.

PHYSICIAN WANTED

We have a good opening for a physician in town of 400 with a large territory. Do not pass this up before writing the Red Cross Drug Store, Larkin, N. D.

FOR SALE

Cadillac coupe automobile, in perfect condition, new tires and new paint; an ideal car for a physician. Will be sold at a bargain. Address M. S., care of this office.

OFFICES FOR RENT

Physician's offices for rent after Dec. 1st, very desirable, steam-heated, and modern. Good location, Cor. of Franklin and Bloomington Aves., Minneapolis. Address Dr. F. E. Bissell, 2620 W. 44th St., or call T. S. Harriet 149.

TWO INTERNES WANTED

Two male internes are wanted for a general hospital in Minneapolis. Rotation of service for one year. Address J. M., care of this office.

Doctor: If you want practical post-graduate work during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797, Post-graduate Medical Dept., Tulane University of La.

REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Diarrheal Dis- eases of Children	Cancer	Fuoperal Septicemia
Ada	1,253	1,432	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Albert Lea	4,500	6,192	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alexandria	2,681	3,001	5	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anoka	3,769	3,972	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Austin	5,474	6,960	8	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Barnesville	1,326	1,353	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Bemidji	2,183	5,099	3	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Benson	1,525	1,677	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blue Earth	2,900	2,319	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brainerd	7,524	8,526	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Breckenridge	1,282	1,840	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....
Canby	1,100	1,528	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cannon Falls	1,239	1,385	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chaska	2,165	2,050	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chatfield	1,426	1,226	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cloquet	3,074	7,031	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Crookston	5,359	7,559	11	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Detroit	2,060	2,807	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Duluth	52,968	78,466	64	7	3	4	.....	1	.....	.....	1	.....	.....	13	5	.....
East Grand Forks	2,077	2,533	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ely	3,572	3,572	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Eveleth	2,752	7,036	11	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Faribault	7,868	9,001	6	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
Fairmont	3,440	2,958	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fergus Falls	6,072	6,887	8	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Glencoe	1,788	1,788	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granite Falls	1,454	1,454	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hastings	3,811	3,983	4	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hutchinson	2,495	2,368	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
International Falls		1,487	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Jordan	1,270	1,151	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake City	3,142	3,142	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Litchfield	2,280	2,333	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Falls	5,774	6,078	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Luverne	2,223	2,540	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Le Sueur	1,937	1,755	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison	1,336	1,811	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Mankato	10,559	10,365	19	2	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
Marshall	2,088	2,152	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Melrose	2,591	2,591	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minneapolis	202,718	301,408	242	29	1	9	6	.....	.....	.....	3	.....	2	40	21	3
Montgomery	979	1,267	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montevideo	2,146	3,056	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moorhead	3,730	4,840	8	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Morris	1,934	1,685	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Prague	1,228	1,554	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
New Ulm	5,403	5,648	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Northfield	3,210	3,215	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Ortonville	1,247	1,774	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Owatonna	5,561	5,658	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Pipestone	2,536	2,475	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Lake Falls	1,666	1,666	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Red Wing	7,525	9,048	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Redwood Falls	1,661	1,666	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Renville	1,075	1,182	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester	6,843	7,844	26	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	5	.....
Rushford	1,100	1,011	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Charles	1,304	1,159	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Cloud	8,663	10,600	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
St. James	2,102	2,102	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
St. Paul	163,632	214,744	197	11	5	9	9	2	.....	.....	3	.....	1	20	17	.....
St. Peter	4,302	4,176	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sauk Centre	2,154	2,154	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shakopee	2,046	2,302	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sleepy Eye	2,046	2,247	3	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South St. Paul	2,322	4,510	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Staples	1,504	2,558	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Stillwater	12,318	10,198	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thief River Falls	1,819	3,174	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Tower	1,111	1,111	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tracy	1,911	1,826	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Two Harbors	3,278	4,990	6	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	2,962	10,473	19	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wabasha	2,622	2,622	3	.....	.....	.....	1	.....	.....	.....	.....	2	1	9	.....	.....
Warren	1,276	1,613	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waseca	3,103	3,054	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterville	1,260	1,273	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West St. Paul	1,830	2,660	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Willmar	3,409	4,135	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Winona	19,714	18,583	15	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	.....
Winthrop	813	1,043	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Worthington	2,386	2,385	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Poliomyelitis	Typhoid Fever	Diarrheal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	2													
Aitkin	1,719	1,638	3	2			1									
Akeley			0													
Appleton	1,184	1,221	1													
Belle Plaine	1,121	1,204	1													
Biwabik		1,690	1													
Bovey		1,377	0													
Browns Valley	721	1,058	1													
Buffalo	1,040	1,227	0													
Caledonia	1,175	1,372	*													
Cass Lake	546	2,011	1	1												
Chisholm		7,684	5	1	1	1										
Coleraine		1,613	1													
Dawson	962	1,318	0												1	
Delano	967	1,031	3												1	
Farmington	733	1,024	2													
Fosston	864	1,055	2	1												
Frazee	1,000	1,645	0													
Glenwood	1,116	2,161	2												1	
Grand Rapids	1,428	2,239	5										3		1	
Hibbing	2,481	8,832	15												2	
Jackson	1,756	1,907	3													
Janesville	1,254	1,173	2			1										
Kenyon	1,202	1,237	1												1	
Lake Crystal	1,215	1,038	2													
Long Prairie	1,385	1,250	0													
Madelia	1,272	1,273	1												1	
Milaca	1,204	1,102	0													
Mountain Lake	959	1,081	0													
Nashwauk		2,080	1	1												
North Mankato	939	1,279	0													
North St. Paul	1,110	1,404	2													
Osakis	917	1,013	1													
Park Rapids	1,313	1,850	0													
Pelican Rapids	1,033	1,019	1													
Perham	1,182	1,376	2													
Pine City	993	1,258	1													
Plainview	1,038	1,175	1													
Preston	1,278	1,193	0													
Princeton	1,319	1,555	2								2					
St. Louis Park	1,325	1,743	1													
Sandstone	1,189	1,818	2											1		1
Sauk Rapids	1,391	1,745	1													
South Stillwater	1,422	1,343	3												1	
Springfield	1,511	1,482	1													
Spring Valley	1,770	1,817	1													
Wadena	1,520	1,820	0													
Wells	2,017	1,755	2												2	
West Minneapolis	2,250	3,022	4													
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	2	1											1	
Windom	1,944	1,749	5													3
Winnebago City	1,816	2,555	0													
Zumbrota	1,119	1,138	*													
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			6	3		1										
Rochester, Hospital for Insane			9	2												
St. Peter, Hospital for Insane			8	3												
Anoka, Asylum																
Hastings, Asylum			2													
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			6	2		2										
Owatonna, School for Dependents																
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			8													
OTHER PARTS OF STATE			652	65	19	14	7	4	....	....	8	1	4	81	53	3
Total for state			1577	144	35	47	28	8	1	....	19	3	22	196	125	8

*No report received. Registrar not doing his duty.

139 stillbirths and premature births not included in above totals.

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PUBLISHER'S DEPARTMENT

NEURONHURST

We have before called attention to the sanatorium founded by Dr. W. B. Fletcher at Indianapolis, Ind., and now under the management of Dr. Mary A. Spink. Dr. Fletcher gave it a national reputation, and Dr. Spink has not only maintained, but has enhanced, that reputation.

PHOTOGRAPHIC DEVELOPING

If our readers have plates and films to be developed, they can be assured of the highest-grade work by taking or sending them to E. B. Meyrowitz, 604 Nicollet Ave., Minneapolis, whose work of this kind is done by hand with results not obtainable in any other way.

The Meyrowitz Company will make a special announcement next month of a full line of cameras for Christmas presents.

PREVENTION—DEFENSE—INDEMNITY

The above words define the ends of the ideal insurance policy for a physician. They make the insurance company say to the physician: We try to keep you out of trouble by the best safeguards; if you still get in, we defend you; if you lose, we pay the cost.

The Medical Protective Company of Ft. Wayne, Ind., claims all this for their policies.

MUDBADEN

Mud baths now have a well-recognized place in the treatment of rheumatism and certain skin and bladder diseases, and not infrequently such diseases will yield to these baths when all other remedies have failed.

The Northwestern profession is rapidly learning that we have right at home baths of this kind equal to the best in more distant parts of the country or even abroad. Mudbaden, at Jordan, Minn., offers, at a very moderate price, all the advantages of the high-priced institutions so far as the baths go.

W. D. ALLISON COMPANY

We believe there has never been stamped upon physicians' office cabinets, operating-chairs, and general furniture a name that means so much of excellence in both design and workmanship as the name of Allison. This is an emphatic statement, but it is true, and, moreover, in this day of sham and poor workmanship, it is a pleasure to endorse a house that gives every customer real and lasting pleasure in his purchases.

The Company has just issued a new catalogue, which it desires to send to physicians. Address W. D. Allison Company, Indianapolis, Ind.

SLEEP OUT-DOORS

The value of out-door sleeping is universally recognized, and few homes are now built without a sleeping-porch or a room convertible into one. The old house has no such thing, but Dr. Walsh's window-tent supplies the deficiency, and it is a question whether this window-tent is not better than a sleeping-porch in our climate. It is a well-nigh perfect device, and the phy-

sician who is not acquainted with it, or some inferior substitute for it, can hardly be found.

The business of manufacturing and selling these tents got beyond Dr. Walsh, and he turned it over to the Cabinet Mfg. Co. of Quincy, Ill. We commend the tent and the company in the highest terms to our readers.

THE MARVEL OF THE X-RAY WORLD

The Scheidel-Western X-Ray Coil Co. call their new radiographic interrupterless coil "the marvel of the x-ray world."

The x-ray specialist has demonstrated his usefulness beyond all cavil, not only in the mere matter of taking radiographs, but in the treatment of many forms of disease. He is in a new field, and it is one of great possibilities, as well as of great responsibilities. His work is not well begun until his office is equipped with the latest and best appliances, at whatever cost they must be obtained or how often replaced by the newer and better apparatus.

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The general agitation for better health conditions in our homes and public places emphasizes the importance of sanitary closets in the absence of sewers and water. The problem is a difficult one, and no ideal solution has ever been presented. We can simply seek for the best appliances obtainable.

The Rex Sanitary Closet Co., of Minneapolis, manu-

factures a cabinet, with means of ventilating into any smoke-flue, which seems to us to meet present conditions better than anything we have ever seen. It has all of the advantages of a wet closet as set forth in a recent Government report on the subject, and does not have one of the disadvantages assigned to the wet closet, which the experts of the Government clearly state.

From the above we may fairly conclude that the Rex Cabinet meets all the conditions set forth in the Government report (Bulletin 463, U. S. Dept. of Agriculture, Aug. 22, 1911).

We shall have more to say on this subject at another time. We call attention to the advertisement of the Rex Company, which appears in our advertising columns.

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THE "STORM" BINDER may be used as a SPECIAL support in cases of prolapsed kidney, stomach, colon and in hernia; as a GENERAL supporter in pregnancy, obesity and general relaxation; as a POST-OPERATIVE binder after operations upon the kidney, stomach, bladder, appendix, and pelvic organs, and after plastic operation and in conditions of irritable bladder, to support the weight of the viscera.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, DECEMBER 1, 1911

No. 23

PRESIDENT'S ADDRESS*

By J. W. ROBERTSON, M. D.

LITCHFIELD, MINN.

Some men are chosen president of this Association because they are great surgeons, others because they have achieved greatness as internists, and still others because of their scientific work, but none of these conditions seem to cover my case. After considerable deliberation I am convinced that I was elected president because I represent that portion of the Association who advocate fair dealing among their fellows, who favor medical societies because they help acquaint the membership with each other and promote good fellowship, and who believe that "knocking" fellow practitioners is bad practice. If it is for these reasons that I was chosen your president I can feel as proud as though I belonged with the great surgeons, the eminent internists, or the renowned scientists.

It certainly is a great honor to be chosen president of this Association, and I consider it a greater honor than being elected governor of the state, because the chief executive of the state is elected by a majority of the voters irrespective of condition, education, or intelligence, while the chief executive of this Association is elected only by educated and intelligent men. I thank you most sincerely for selecting me to this most coveted position.

It will not be my purpose to speak upon any special subject at this time, but I shall call your attention to several things necessary to the general welfare of the profession of the state and to our Association in particular. I have received quite a number of requests from members of the

Association asking me to call attention to several subjects in my annual address, and I shall proceed to do so.

THE ASSOCIATION JOURNAL

At our last annual meeting the House of Delegates voted that the words *Northwestern Lancet* be dropped from the title of our official paper, and the editor of the Journal, who is president of the Publishing Company and was at that time in the chair as president of the Association, accepted the recommendation; but, as is explained in the columns of the Journal for January 1, 1911, compliance with the order was found to be impracticable, if not impossible, because of certain postal regulations and for other important reasons not comprehended at that time, either by the president or the Association. The situation was an embarrassing one, and could be properly dealt with only by the House of Delegates, but a special meeting of the House was hardly to be thought of. A special meeting of the Council was called at St. Paul on December 27, 1910, when, with all but one of the Council present, the whole matter was thoroughly canvassed, and by a unanimous vote the Council, assuming the responsibility in the emergency, extended the contract with the Publishing Company for one year. Thus the subject is again before the House for consideration and action.

The apparent anxiety of the editor led him to publish, in the Journal of January 1, 1911, some thirty letters received from the leading men of the state who have been contributors to the columns of the Journal. These letters bear testimony to

* Read at the 43rd annual meeting of the Minnesota State Medical Association at St. Paul, Oct. 5 and 6, 1911.

the high standing of the Journal, and to its quite unique standing in the way that matter from contributors is edited before publication. Other presidents in their annual addresses have commended the Journal, and I cheerfully add my own testimony to this quality of the paper and my appreciation of it, as well as to its excellence in every respect.

In a later issue of the Journal, namely, that of July 15, 1911, the editor tells us of an arrangement made with the North and South Dakota State Medical Associations whereby these associations are to be represented upon the editorial staff by an associate editor in each state, the three associations joining in mutual effort for the advancement of all medical interests in the Northwest, especially as far as such interests can be advanced by a strong, mutually supported medical journal, having an eye single to the public welfare in matters medical and to the best interests of the medical profession of the three states.

This arrangement, as is clearly set forth in the above issue, was made wholly subject to your approval. I heartily recommend that our relations with the Journal be maintained in the future as in the past, and that no obstacle be put in the way of the Publishing Company in the matter of the name after the interests of the profession have been properly safeguarded, if any such provision is needed in our future dealings with men who have served us for many years so faithfully and efficiently as have both the editor and the publisher of the Journal.

I also recommend that we heartily approve the arrangement made with the North and South Dakota Associations and that we pass a vote of thanks to these associations for their willingness to give up any pride they may have in individual state organs and to join us in the further strengthening of a single Northwestern medical journal which may advance all the best interests of the medical profession of each state.

I further recommend that an invitation be extended by this Association to the Medical Association of Montana to join in the publication of the Journal upon an equal footing with the other associations.

MEDICAL EDUCATION

Every person who is to treat human ailments, regardless of the school or the peculiar methods employed, should be required to have a thorough training in the fundamental branches of medicine. When it comes to teaching students the

scientific branches of medicine I cannot see for my part why these branches have to be taught by an allopath, a homeopath, an eclectic, an osteopath, a hydropath, a neuropath, or a Christian scientist. Anatomy, chemistry, physiology, surgery, and obstetrics always remain the same, and the teaching should be the same. It gives me a feeling of spinal irritation when I hear people speaking of homeopathic surgeons or eclectic obstetricians. Are not the principles of surgery and obstetrics always the same, no matter what methods of medicine are followed?

It seems to be the consensus of opinion among the members of this Association that medical education should embrace—

1. Graduation in a state high school.
2. Two years in science and arts in some college or university
3. Four years in the study of medicine.
4. One year in hospital training.

This course of study, I believe, would meet with approval by a large majority of the medical men in the state.

Now, the only difficulty that confronts us is what shall the students study during these two years in a college or a university? Many medical men believe that these two years should be taken up with studies allied to medicine, such as Latin, botany, chemistry, pharmacy, etc., while the college and university authorities insist that if the students are coming into the departments of literature and arts they (the authorities) will dictate such studies as they see fit, and bolster up their arguments by saying that putting the students through physics, higher algebra, etc., will develop their minds. We will admit that these subjects are mind-developers all right, but, on the other hand, if students go through the high school, take two years in Latin, botany, pharmacy, etc., and then have five years in medical and hospital training, their minds will be trained as well as the minds of graduates of the scientific or literary departments of any university, while the other studies mentioned would be of great help to them in a professional way. I believe that the members of the State Medical Association are the proper persons to dictate what studies the medical students shall take during the two years in the scientific departments of the university, and I would recommend that the Association appoint a committee to designate such studies.

THE SCHOOL OF MEDICINE

A few weeks ago one of the New York papers published an article on the differences of opinion

held in schools of medicine. I did not like the tone of the article, neither did I like the influence it would be liable to have upon the general public. At one time I was before a court in Chicago as an expert witness, and a very clever lawyer repeatedly asked me as to what school of medicine I belonged, and when I told him that I was a "regular," he wanted to know if I was an allopath, homeopath, hydropath, electropath, osteopath, an eclectic, or a Christian scientist? My answer was that as far as I knew I did not belong to any of the schools mentioned, but as a regular physician I was not tied to any special school or line of treatment, but always gave such treatment as in my judgment was for the best interest of my patients.

I think that this answer would have been given by a majority of the members of this Association. For my part I cannot see how there can be any difference of opinion in, for instance, the treatment of diphtheria. Can any sane person stand out against the use of antitoxin in diphtheria when the reports show that the death-rate has declined from 43 per cent to 5 per cent by its use? Would any person, but one insane, stand by and see his children suffering with this dread disease treated by any special school or cult that would not use antitoxin when he knew that with this treatment the percentage was so greatly in its favor?

Is antitoxin an allopathic, a homeopathic, or an eclectic remedy? No! It is a scientific remedy and as such should be so used. Can any school or cult in or out of medicine say that vaccination will not stop smallpox, after looking over the statistics from the Philippines? Dr. Jenner may have fallen upon vaccination accidentally, but years of experience have proven him to have been scientifically correct. Of course the older methods of vaccination were crude and often caused considerable trouble and harm, but the truth was there just the same, and it will remain without any reference to any cult or school of medicine.

The science of medicine has shown us many forms of disease germs in the past few years, and I would like to ask if these germs belong to any school or cult? I should say not. It has taught us the uses of many vaccines, which are of inestimable value in treating certain forms of supposedly incurable diseases, and has done much to encourage further investigation. We are willing to admit that medicine is very lame

in many ways, but the improvements have been very great in the past ten years and will be still greater in the next decade. One would think that an intelligent people with our present facilities for learning would soon drop the idea of any special school of medicine and would see the whole tendency at the present time is to true scientific medicine.

All of the physicians present who have practiced medicine as long as I, have often had some of their pet theories and ideas in medicine knocked to pieces against the rocks of scientific truth, but what can we do under these circumstances? We can only watch the pieces sink in the sea of oblivion. The only reason that many of the older physicians get "back-numbered" is because they hate to let go of their pet theories. But let go they must, or down they go with the pieces. I think it is high time for the profession of this state to make some united endeavor to educate the people to the fact that there is only one true school of scientific medicine.

COUNTY HEALTH OFFICERS

I believe it is to the best interests of the people and also to the medical profession of this state that there be appointed in every county in the state a county health officer whose business it shall be to look after the county health department and have a general supervision of the school children. My proposal is to have a first-class physician in every county of the state at a salary of \$3,500 per year and have him devote his whole time to the general public health and school supervision. Should a bill of this kind come before the state legislature in the near future I hope that the members of this Association will get into line and help secure favorable legislation.

COUNTY MEDICAL SOCIETIES

I would advise that our county medical societies make special effort to get every reliable physician within their respective jurisdictions into their societies; for it is a well-known fact that when physicians are well acquainted with each other there is less liability to "knocking" and consequently more professional work for every one concerned.

I believe that the Association should send a letter to Dr. Harvey Wiley congratulating him upon his fortunate escape from the "interests," and also to inform him that the Minnesota State Medical Association stands for pure drugs and pure food for the good of the people.

VISCEROPTOSIS*

BY LE ROY CRUMMER, M. D.

OMAHA, NEBRASKA.

I must confess that I little thought when I spent a half day talking over my ideas of visceroptosis with one of your program committee that it would result in an invitation to read a paper on this subject before the Minnesota State Medical Association. That I appreciate the honor goes without saying, but to try to put my ideas on this subject tersely in a fifteen-minute paper fills me with apprehension.

The basis of my opinion rests upon more than 500 cases, fully twenty per cent of them having previously had various operations. More than 200 of these cases have been observed on an average of six weeks in proper hospital care. In my thesis I shall not consider those cases which may be called acquired, in which the definite etiology of rapidly recurrent pregnancies and lacerated perineum exists, but will devote myself to the congenital type.

At the very beginning, let me state my opinion and then try to develop it by suitable argument. Visceroptosis is a condition and not a disease; symptoms occurring in an individual with visceroptosis are purely disturbances in function and not dependent upon changes in structure.

The second postulate, I purposely make thus broad; but, so as not to be misunderstood, I will say that these individuals are subject to diseases, inflammations, and new growths, although in no higher percentage than the entire community.

The following stigmata are present in these individuals: 1. The phthisical chest with its sloping shoulders, prominent clavicles and scapulæ, the short anterior—posterior diameter, the flat sternum, the acute costal angle, and the floating tenth rib, i. e., Stiller's sign.

2. The long abdomen with the upper half sunken and the lower half protuberant. In women, narrow hips; in men, on the contrary, wide hips. On examination of the abdomen, the right kidney can be palpated and may be movable to the third degree. In some cases, the left kidney is also palpable, but is never as freely movable as the right. The colon can be palpated as a firmly contracted mass throughout more or less of its extent.

3. On pelvic examination, the uterus may be found in almost any position, except the one the

gynecologist considers ideal, and when symptoms of malnutrition have appeared, it is generally large and heavy.

4. The chemical examination of the stomach-contents shows all possible variations in the hydrochloric acid,—decreased, normal, or increased. At times, a change even in the same case from achlorhydria to extreme hyperchlorhydria within a few hours.

5. The stomach on inflation is found vertical, not dilated, as it is frequently called, at least, not enlarged in the same significance as an acute dilatation of the stomach, but rather from lack of tone, as are many of the skeletal muscles. The lower border is generally below the umbilicus, and the upper border shows easily, running from the left costal border to the right, one-third to one-half the distance from the xiphoid to the umbilicus.

6. The cecum is felt as a firm and elastic mass, freely movable from side to side. Occasionally, the peculiar condition described by Wilms, an elastic mass, with gurgling, which is easily rolled under the fingers, replaces the spastic cecum for a few hours or a few days at a time.

7. The ascending colon can frequently be followed to the costal border in a long curve with the convexity toward the middle line.

8. The transverse colon can be mapped out across the abdomen dipping downward, even to the pubes.

9. The descending colon can also be palpated, but is fixed and ends in the sigmoid, which may extend one-third across the lower abdomen.

10. Even the rectum can be palpated as the same tense cord through the vagina, and pressure will frequently bring the patient to state that this is the same pain which causes most of her pelvic trouble.

11. This entire colon is contracted to a cord the size of the thumb, and never in my experience contains the heavy masses of feces so frequently described as an etiological factor in the production of coloptosis.

As I said above, visceroptosis is a condition, and all of these signs are frequently found in the routine examination of individuals who present no symptoms. But allow one of these individ-

* Read at the 43d annual meeting of the Minnesota State Medical Association at St. Paul, Oct. 5 and 6, 1911.

uals to go through a period of stress and its resultant lack of assimilation, then add restricted diet for a time, and the symptoms and complaints become manifold.

In the main, this malnutrition is the physician's fault because a restricted diet is generally ordered for the vague indigestion following stress. This is followed by food fads till the patient loses from ten to thirty pounds in weight, much of it necessary abdominal fat.

Among the most important symptoms bringing the patient to the physician are—

Stomach symptoms. This feeling is one primarily of distress; pain in its true meaning is never a feature. The words and ideas and analogies used by patients to describe these sensations are difficult to interpret. But if we ask the patient if the distress is like that felt following some sudden, overwhelming grief, we generally get an affirmative answer, consequently I record these symptoms as "chronic grief."

Further abdominal symptoms are those of distention, bloating, and belching. As far as belching is concerned, this symptom is always preceded by swallowing air, and is an effort to relieve distension in the transverse colon.

On careful observation of the bloating it is found to begin at least in, and is frequently limited to, one of the physiological segments of the colon, described by Starling. Provided this is in the first segment, i. e., the cecum, backache is frequently severe. When this occurs in the last segment of the transverse colon, palpitation and precordial pain are associated symptoms.

A symptom met with often in men, but less frequently in women, is a severe pain extending from the left costal border to the tip of the left shoulder and is probably dependent on disturbances in the same region.

The normal function of the bowel is always disturbed. In early cases, we find diarrhea, or alternating diarrhea and constipation, and finally severe persistent constipation, always with occasional or persistent secretion of mucus with the bowel movements. This mucus may be in any amount and almost any color, from clear limpid and fresh up to the brown membranes and casts of the bowels, on which we formerly diagnosed mucomembranous colitis.

Abdominal pain (real pain) is usually found in the more severe cases. A general tenderness and consciousness of the contracted colon is almost always found; spontaneous pain is frequent and occurs at the physiologic rings previously

mentioned in the cecum, not in the appendix, at the middle of the ascending colon, not in the kidney, not a Dietl's crisis, at the end of the first one-third of the transverse colon, not in the gall-bladder, a little to the right of the splenic flexure, not in the heart, and at the sigmoid, not in the ovary. This pain frequently is more severe at one or the other of these places, but even in such cases it always does occur at some of the other rings, and the entire colon is spastic and tender. This pain is frequently severe enough to justify the term *colica mucosa*, given it by von Noorden.

A severe, agonizing, prostrating pain may occur anywhere along the cecum, with distension and all the symptoms of an inflammatory condition, except the essential, i. e., fever, rigidity, jaundice, etc. That this pain is due to mucus is shown by the result of castor oil when membranes and mucous casts of the bowels are invariably passed. As far as this mucus is concerned, it is not a manifestation of inflammation, but is merely a functionally increased amount of the normal lubricant of the bowels.

It is impossible to mention all of the symptoms presenting in such cases, but whenever we are consulted about palpitation, headache, backache, coxalgia, insomnia, nervousness, and fatigue, we should always look for the history and signs previously mentioned, and if even only a few of these are found, we cannot make many mistakes if we put the case in this rubric.

Whatever be the source of the nerve-force, it cannot be unlimited if it is like anything else in the world. So with these cases, congenitally deficient, plus a period of stress with its attendant malnutrition, and an increased demand for more nerve-force from the abdominal viscera, all working in a bad mechanical position, and an increased consumption of nerve-force in pain and generally abdominal distress, we have mighty little surplus of nerve-force to control these manifestations not essential to life, and hence, to my mind, we have an explanation of the status of nervous instability and irritability, and vasomotor paresis, we variously term neurasthenia, pscasthenia, etc.

I hope I have made plain how manifold the symptoms may be, based on the original visceroptosis of congenital origin plus malnutrition. The protean manifestations have led to a very near-sighted view in the minds of many physicians. Each specialist can find signs and symptoms belonging especially to his field. The oculist finds eye-strain. The gastro-enterologist

finds disturbances in secretion and motility, which he designates under a score of fanciful names. The gynecologist sees retroversion, subinvolution, and a thousand excuses for operation. The surgeon—but here I pause—formerly he fixed the kidney; he still removes the appendix for chronic appendicitis. Edsall¹ says, "It is a noticeable fact that no surgeon, as yet, has made a statistical compilation of the results of his operations for chronic appendicitis." An unlimited number of normal ovaries have been removed from such cases; but with the repeated failures of the old stand-by ones, newer surgical suggestions constantly appear. On this point I cite the following:

"Appendectomy for Appendiceal Dyspepsia," Moynihan²; "Appendectomy for Mucous Colitis," Deaver³; "Operations Advocated for Lane's⁴ Kinks, viz., Ileosigmoidostomy, Colectomy, Colocolostomy;" "Inguinal Colostomy, Cecostomy, and Appendicostomy," Rockey⁵; "Colotomy," Puls⁶; "Cecopexy," Wilms⁷; "Longitudinal Plication," Bastianelli; "Nephropexy," Longyear⁸; "Suturing Transverse Colon to Abdominal Wall," Lambotte⁹; "Gastropexy, by Suture of Stomach to Abdominal Wall," Duret¹⁰; "by Gastrosuspension," Davis¹¹; "by Shortening Gastrohepatic and by Gastrophrenic Ligaments," Beyea¹²; and by Hammock Suspension, Coffey¹³; "Gastroplication; Gastroenterostomy," Deaver¹⁴; Operations for Hepatoptosis, by Suture of Round Ligament and Denuding Peritoneal Surfaces of Liver and Peritoneum, Elliott¹⁵; by Holding up Anterior Border of Liver by Gall-Bladder Fixation, Jonas; and by Shortening of Round Ligament of Liver, Coffey¹⁶.

"Shortening and Tightening of Abdominal Wall by Plastic Operation," Depage¹⁷; Resection and Suture of the Fascia of Recti," Webster¹⁸.

"Various Round Ligaments and Fixation Operations of Uterus and Suspension of Ovaries, Breaking of Cobwebs in Attic of Abdomen," Morris, and "Removal of Jackson's Veil in Membranous Pericolicitis," Jackson¹⁹.

Does not this remind you of a fifty-year-old article on the treatise of whooping cough? The truth of the matter is, these cases should be operated on just about as often as we trephine for headache or give digitalis for palpitation, and if they have been operated once, don't operate a second time for adhesions. However, some excellent work has been done on certain elements of this condition.

Goldthwait²⁰, in his investigation on backache and sacro-iliac diseases, makes a special classification for this condition and with his pupils has called attention to the childhood type of visceroptosis.

Martin²¹, on "Perpendicular Pelvis," analyzed the anatomy of pelvic conditions in these cases, but, unfortunately, he does not associate these with the abdominal condition.

Smith²² approaches this subject from a broad standpoint, and properly develops the congenital origin of this condition.

When we bring these various ideas together and associate them properly with visceroptosis, *per se*, we find this element is common, weakness of connective and supportive tissues, and as this can hardly be an acquired characteristic we have here further evidence of this congenital, if not hereditary, origin, visceroptosis. Again, as an evidence of the tendency to the production of low-grade tissues, we have the quick production of adhesions after abdominal operations.

As far as diagnosis is concerned, the direct diagnosis of visceroptosis is made on the details above given. I can scarcely understand Rovsing's statement that in only eighteen out of seventy-five cases was the diagnosis made before operation.

Differentially, we must consider, primarily, tuberculosis and hyperthyroidism. Tuberculosis can usually be directly diagnosed by the physical findings and definite course, but incipient cases occurring in such individuals present difficulties in diagnosis, and the outcome is serious if a mistake is made.

There is no sharp dividing line between hyperthyroidism and visceroptosis; in fact, the gradations between exophthalmic goiter on one side and the text-book description of mucomembranous colitis on the other could be platted on a perfect curve. Even Kocher's blood-picture with lymphocytosis is frequently found. So striking is this in the border-line cases that I have often wondered whether, after all, there is not a deficiency in some internal secretion at the bottom of these cases.

Perhaps the most difficult part in diagnosis is in picking out those which have a definite surgical condition, i. e., ileus, pus, new growths; but, unless the indisputable symptoms of such condition are present, the chances are twenty to one that the case is one of visceroptosis and not to be permanently improved by operation, and in those cases which do get up improved, the same

improvement would follow the rest without the operation.

One of the most positive signs of visceroptosis is the presence of from two to eight clean abdominal scars.

We can hardly speak of etiology in a congenital condition, but when we consider the past history of these cases, as they come to us presenting symptoms, we find several interesting facts. Of most importance, perhaps, are the data frequently given, which allow us to make a retrospective diagnosis of chlorosis. Very similar is the history of a sudden change from the square, fat, flabby girlhood to a slender, nervous womanhood. Another striking fact is the high percentage of these cases who require glasses.

In the analysis of the causes of stress, we find the most divergent conditions. In the chlorotic period, we see over-study in the high school, over-ambition in musical studies; then, later in life, family cares, financial worry, grief, etc. But careful analysis will bring to light the exact cause in almost every case, and it is well to insist on a full understanding on this point with the patient, if for nothing more, to establish complete confidence.

Perhaps the most important fact in the development of symptoms is the loss of weight. In every case we find that, in spite of a congenital visceroptosis, there has been a longer or shorter period of physical and mental health, and that, coincident with a loss of fat, abdominal symptoms begin.

When we consider prognosis we must stop and reconstruct many of our ideas. In talking with a prominent internist not long ago, he expressed the most pessimistic ideas concerning the future of these cases, and I am afraid this is the attitude of a majority of the profession, and perhaps the excuse for trying something in the surgical line so frequently.

But when we remember that the success of every form of charlatanism, from Mesmer to Christian Science, is due to the cures produced in exactly this class of cases, it seems to me it is time to revise our ideas and seek some form of legitimate treatment which will bring us better results than surgery and perhaps as good as "New Thought."

Just as with tuberculosis, the earlier the condition is recognized the higher the percentage of cures and the easier to cure. In the early and mild cases it is perhaps better to speak of prophylaxis than of treatment. The main rule of prevention is to protect nutrition, and let me advise

you all, never allow a patient to remain on a diet containing less than forty calories per kilo, for more than two weeks, except for a definite organic condition, such as gastric ulcer or typhoid.

TREATMENT

You will have seen already that I consider nutrition the main element, and again let me assert that, when these patients are properly nourished, that is, have a proper amount of intra-abdominal fat, they are free from symptoms.

It was Weir Mitchell who discovered how to treat these cases, and it must be remembered that he dealt only with the most severe type of the disorder, and yet his success was one of the most important achievements of American medicine. And if we recognize these cases earlier, and put them on the same treatment as modified by experience, our results will be better and quicker than his.

The elements of successful treatment are as follows:

1. Psychic management.
2. Increased nutrition.
3. Care of the bowels.
4. Medicinal.

The psychic management requires removal from the environment in which the symptoms were produced and isolation, the latter, at least, to the extent of controlling the mental activities of the patient. This means, at best, sanitarium treatment, but in most cases an ordinary general hospital with a good diet-kitchen is sufficient.

Home treatment, even in what the Germans call the "Golden Class," is never satisfactory. In the course of the treatment, I prefer to term the psychic method used, *reeducations*. A rational explanation of symptoms and the ordinary discussion of normal physiology are sufficient without hypnosis, semihypnosis, suggestion, psychoanalysis, or any of these newer ideas. When, however, an extreme grade of psychasthenia is present, certain of the modes of treatment may be added with advantage.

In building up nutrition I never waste time on preliminary milk-diet, but order full and forced feeding from the very start. The psychic juice of Pawlow is provided for by clean napery, good china, and an attractive tray served by a neat nurse, and, in addition to full meals, lunches are ordered two or three times a day.

After each meal hot packs are placed over the epigastrium for thirty or forty minutes. In the majority of cases the first meal is digested with-

out distress, and there is no further trouble about the forced feeding.

The first rule in the care of the bowel condition is to avoid cathartics; even the simplest cathartics must be tabooed. The only exception is castor oil, which may be given when symptoms point to an accumulation of mucus in the colon. If administered at the right time this will generally prevent the attacks of colic, and given even during the attack will cause the evacuation of the mucus and so cut short the attack.

As a routine measure rectal injections of six ounces of olive oil are given each evening, and usually produce a soft, normal stool the next morning. On occasions the more active enemas are needed, but never unless there has been no stool for forty-eight hours.

The regularity of the bowels is aided by wearing an abdominal support, which at the same time relieves much of the abdominal distress. I have found but one satisfactory support for bad cases, and that is the Rose adhesive-plaster bandage. When the patient is up and around this can be replaced by a properly adjusted corset.

Belladonna is the one specific in these cases and must be continued over long periods. Other drug treatment is to be avoided as much as possible. Iron, of course, is needed in most cases, on account of the anemia always present. Bromides are occasionally indicated, but the more powerful sedatives should not be used.

The time required varies with the severity of the case, but averages about six weeks.

Results under the treatment show that seventy-five to eighty per cent are brought to that condition the Germans term "Arbeits fähig." This you will note is almost exactly the same percentage that are cured in surgical reports, and the twenty per cent of failures are good cases for my medical colleague's eighty per cent of successes.

REFERENCES

1. Edsall, David L.: *Progressive Medicine*, Dec., 1909, p. 90.
2. Moynihan: *British Medical Journal*, Jan. 29, 1910.
3. Deaver: *Treatise on Appendicitis*, 1896.
4. Lane Arbuthnot: *New York Medical Journal*, Aug. 6, 1910; *Surgery, Gynecology and Obstetrics*, Nov. 1910, p. 495.
5. Roakey: *Annals of Surgery*, 1911, p. 686.
6. Puls: *Beitrage zur Clinisch. Chir.*, 1910, Vol. LXIX, p. 306.
7. Wilms: *Centralblatt für Chir.*, 1908.
8. Longyear: *Nephrocoloptosis*, St. Louis, 1910.
9. Lambotte: *Traitement Chir. de l'Anteroptosis*, 1901.
10. Duret: *Revue de Chirurgie*, 1896, XVI, p. 421.
11. Davis: *Western Medical Review*, Oct. 15, 1897, p. 291.
12. Beyer: *Pennsylvania Medical Journal*, 1903, Vol. XI, p. 257.
13. Coffey: *Philadelphia Medical Journal*, 1902, Vol. X, p. 506.
14. Deaver: *Therapeutic Gazette*, Jan., 1906, Vol. XXII, p. 14.
15. Elliott: *Annals of Surgery*, Vol. X.
16. Coffey: *Transactions of Western Surgical and Gynecological Association*, 1904.
17. DePage: *Annals de la Soc. Belg. de Chir.*, 1893, Vol. L, p. 297.
18. Webster: 1901.
19. Jackson: *Trans. of Western Surgical and Gynecological Association*, 1910.
20. Goldthwait: *Boston Medical and Surgical Journal*, Vol. CLXVI, p. 365.
21. Martin: *Journal American Medical Association*, LVII, p. 358.
22. Smith: *Journal American Medical Association*, LV, p. 1860.

IMPORTANT FACTORS IN THE DIETETIC TREATMENT OF DISEASE*

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There is probably no subject that the majority of practitioners must so frequently teach and practice as dietetics, and when compared with other branch subjects of medicine there can be no question that it is of greatest importance.

Edsall¹ says the practical methods generally employed (in dietetics) have always been relatively further behind contemporary scientific contributions than has been the case in any other important part of medical practice.

There is no question but what practitioners are more positive and more extremely dogmatic in their dietetic advice than in any other advice given to patients, and if the import of recent

literature is to be taken, the position held is that of presumption with a basis in personal fancy and individual palates.

That there is no prevailing system to feeding in health and disease is known to you all. Foods are classified at present, even in most of our hospitals, as liquids, semisolids, and solids, rather than as carbohydrates, fats, and proteins. A prescription for a definite quantity of one or all of the food-principles gives trouble to the private nurse, the diet-kitchen nurse, and the interne; and finally an appeal is made to you after a day's struggle with your order to explain how it is worked out.

We have definitely classified our drugs and estimated dosage, and it would be a tyro in

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

medicine who would presume to prescribe a half dozen drugs belonging to any one class, say the hypnotics, without a thought of synergistic action. We presume to know the physiological action of our drugs, but seldom is advantage taken of a like knowledge of our food-principles.

A study in dietetics involves a close physiological knowledge of the digestive tract and metabolism, an understanding of the food-principles and their energy-forming values, and also sufficient specific information of the individual personal equation involved.

The correct use of food involves more science than does drug therapy. A successful application of scientific principles cannot be made until physician and patient are well divested of fancy and prejudice. This does not mean that flavor and psychic suggestion to the appetite are to be disregarded, for, on the contrary, they are of much importance. It does mean, however, that the physician's dislike of milk should not deter him in prescribing this food, nor should the patient's dislike of the same food preclude its use when the skillful dietetician can direct its successful administration.

An excellent practical knowledge of dietetics can be easily acquired. In materia medica and therapeutics groupings of synergistic drugs are made, units of strength are determined, and doses for physiologic action are learned. In like manner, foods are separated into proteins, carbohydrates, fats, salts, and water. Their units of strength are 4.1, 4.1, and 9.3 per gram.

The diet of natural selection represents 500 grams of carbohydrate, 118 of protein, 56 of fat, 20 of salt, and 2,000 of water in a twenty-four hour ration. This gives a total of approximately 3,000 grams, which represents 20 units per pound of a body-weight of 150 pounds, which is an average requirement for ordinary work or exercise. When at rest about half of this food is required. The nursing infant requires approximately three times as many calories per pound of body-weight as does the adult, because of a relatively greater heat-radiating surface and the demands incident to rapid growth.

With the analytical values in the diet of natural selection familiarized, and a table of food values expressed in percentages of contained food-principles and caloric equivalents for reference ^{2, 3}, any practitioner is ready to proceed as definitely as he does with drug therapy, using standardized drugs and definite dosage.

The subject of this paper will be very inade-

quately discussed if much attention is not given to some factors of prime importance in dietetic preventive medicine.

A consideration of the digestive tract is aided by a brief reference to its embryological development. In the evolution of the different systems in the human body, perfection of equipment for function performed is perhaps better illustrated by the alimentary canal, with its complexity of appendages, than by any other system. The development is from the entoderm, but equipment is drawn from the ectoderm and mesoderm. The appendages, which later seem but remotely associated with the canal, are, in their early formation, quite directly connected.

The salivary and thyroid glands are at first solid sprouts of epithelium. The liver, bile-ducts, pancreas, spleen, and lungs are all developed from the primitive gut, and, functionally, in later life the processes of digestion and metabolism involve all in the ultimate disposal of the body's proximate principles.

Food should be supplied to the body in quality and quantity according to the demand made by physiological function. We have learned how to anticipate in many instances these demands, thereby meeting emergencies which otherwise would result in pathological physiology.

An accurate daily observation of the body-weight over a certain length of time is regarded by Sahli⁴ as a valuable diagnostic means to this end. A simple record of the urine and stools, (a twenty-four hours' quantity), observing the specific gravity, albumin, and sugar reactions of the urine, and the form, color, consistency reaction, and pathologic admixtures of the stools, will supply much more information than is generally thought obtainable.

An approximate record of the daily inješta should be kept and compared with the body-weight.

The Schmidt test-diet should be given for three days, beginning and ending with a carmine capsul. A careful examination of the stool between the carmine indicators yields invaluable data concerning the digestion and absorption of a standardized diet. Of the three functions,—motility, absorption and enzymic action,—the latter is studied and treated best. All too frequently motility and absorption are much neglected. From these neglected sources is derived information that easily solves many otherwise unyielding problems. Brandt⁵ has shown that the maximum absorbing power of the stomach

was obtained with a chyme concentration of 20 per 100, and that absorption ceased at 5 per 100. Combe⁶ says absorption is an important antitoxic factor, because it removes the digested matters as they become formed and before they become the prey of the intestinal bacteria. Of the causes favoring absorption there is but one that we can influence, and that is the diminution of the liquids taken with the meals. In the stomach, then, the less liquid present the greater the absorption; hence a solid and dry meal favors absorption.

Motility is stimulated by large vegetable meals, large amounts of fluids, a high percentage of cellulose or other indigestible food matter, and muscular activity. It is slowed by small amounts of food and by food in a very fine state of division. Predigestion and concentration inhibit motility. Enzymic action may easily be inhibited by deficient motility. When food is retained in the stomach beyond its normal digestive time a disturbance of hormones and activators of the enzymes results.

The emotions of fear and anger, the effects of shock, neurasthenic states, neuroses, goiter, etc., as shown by Crile⁷, are very frequently marked depressors or suppressors of enzymic action. The enzymes are most effectively stimulated by the different food-principles. The drug tonics have relatively little direct value for enzymic stimulation. Bread is the most effective means we have for stimulating gastric juice, richest in pepsin and acid, yet meat stimulates a larger quantity flow of the same, but it is of a poorer quality. In other words, the total acidity is greatest with meat and less with bread.

In duodenal digestion meat stimulates the protein enzyme, starch the starch enzyme, and fat the fat enzyme and its emulsifying aid, the bile. There is a beautiful interdependence of enzymic action. The starch enzyme of the mouth is an effective complement of the starch enzyme of the duodenum.

The protein is subjected first to cleavage by pepsin, next by trypsin, and finally by erepsin to amino acids, the molecules (or bricks) to be used in body-building.

Carbohydrate is more easily prepared for metabolism than is protein, and fat is perhaps subjected to but one enzyme, namely, steapsin. The main principle involved in metabolism is made clear in Metchnikoff's⁸ description of the actinian, a lower form of life. The tentacles are used to seize food promiscuously, and the lips and esoph-

agus are used to estimate its suitability. If unsuitable it is at once rejected, but if suitable it is surrounded, covered with mucus, and penetrated with filaments which have epithelial cells. These cells at once perform intracellular digestion. This is equivalent to what we so frequently consider in our every-day problems under the term *phagocytosis*.

The limitations of this paper will not permit more than a brief discussion of a few important dietetic problems. The subject of immunity to disease is now so important that the remainder of the paper will be given mainly to its discussion.

There are no means for immunity so effective as that of diet. Vaccines, bacterins, and sera for the most part are protective proteins that should have been obtained from food. The child or adult fed upon an excess of carbohydrate is a well-known example of low immunity to disease; the baby with rickets is commonly fat and non-resistant and is consuming a diet largely of carbohydrate. An excessive protein diet is a constant source of danger to the body's resistance.

The well-balanced diet insures a correct division of digestive and metabolic body-work. Each body cell thereby acquires full nutrition, performs its full function, and consequently is at the highest obtainable state of self-resistance. Wells says that not only leucocytes but tissue-cells are capable of moving and performing phagocytosis when properly stimulated. This fact is of enormous importance, for we have here the suggestion leading, by ways and means, for not only permanent strengthening of our defenses, but for emergency immunity.

It is now a well-established fact that fats can, and do wonderfully, increase the body's immunity-power. Lusk states that ingestion of fat has for its object the relieving of the intestine from excessive carbohydrate digestion and absorption. Green says "The lecithins and fatty acids, especially oleic acid, will, in a measure, replace a hemolytic complaint."

It is excellent practice in many intestinal troubles to rest the tract by a diet of fat, which will relieve the work that has to be done when the food residue is large. (A pint of cream, three tablespoonfuls of olive oil, and six patties of butter will yield, approximately, 1855 calories, or an ample food-value for twenty-four hours when the body is not at work). Besides resting the digestive tract by this diet, immunity-power is increased. It is a well-known fact that the

leucocyte count is increased more than 33 per cent after taking food, and the greatest increase is after an exclusive meat ration.

The old idea that a full stomach prevents infection has a basis in fact. Protection against sudden dissipation of energy is best obtained by a quickly assimilated form of carbohydrate and next by a fat that melts at the lowest temperature.

Carbohydrate and fat can be regarded as foods that do not become an essential part of the body; however, they represent the most available forms of energy when metabolized. The dextrose of the blood and the glycogen of the liver are the body carbohydrates that are ever ready for immediate expenditure. The action of carbohydrates is remarkable in diabetic patients when the body fat is breaking down so rapidly that acidosis is produced. It is better to avoid lowering the carbohydrate content of the diabetic diet below 80 grams for the twenty-four hour ration, even if a rise in sugar output results. It is much better to have a live patient excreting an increased amount of sugar than a patient who dies with a sugar-free urine, yet poisoned with broken-down fat.

The so-called diseases of childhood would doubtless be greatly limited if the child were properly fed. Lusk says a reduction of 15 per cent in the intake of food brings the child's prosperous growth to a standstill. More children are underfed than we have thought. The wonderful candy business thrives on this child catastrophe. This or some other form of carbohydrate has prevented the ingestion of a proper amount of protein for growth, and fat for the rapid heat loss which takes place in the active child.

Our grand-mothers told us, truly, that candies and other sweets helped to destroy the teeth, but this is not all that should be said. The bacterial flora of the mouth has much to do in affecting the entire digestive canal. Good teeth are two good lines of defense against disease. Candies and other sweets should be given to children in very limited quantities and only after meals. The growing child needs an abundance of protein and fat. We cannot feed two children of like age and weight exactly the same amount of food, for the one child may require food for a three times faster growth than does the other child. A simple weekly chart of weight and height is the best index for the required amount of food.

The food principles are subject to very many indications and contra-indications. The carbo-

hydrates, for example, are demanded in fevers to save the body proteins. The enormous loss of weight observed during fevers should be prevented if feeding is properly done. Starving periods should be of very brief duration, and any continued fever should always be fed food enough to prevent significant loss of weight and strength; a few calories more than is needed by the body at rest will usually suffice.

Garcia⁹ estimates that protein putrefaction in the intestines is diminished two-thirds in the presence of carbohydrates. As putrefaction of protein bodies normally occurs in the large intestines and normal fermentation of the carbohydrates in the small intestine, the indication in treatment is to determine the position of the disturbance, then withhold the offending food principle.

Combe¹⁰ says that the antitoxic system comprises—

First, factors in the intestines which diminish and limit putrefaction, as diet, absorption, acidity of gastric juice, bile, pancreatic juice, acid reaction of the small intestine, and the flora of the large intestine. The *aërobis* (*coli* and *lactis*) being diminished in auto-intoxication they may be increased by a diet of farinaceous food and milk.

Second, defenses surrounding the intestinal canal, such as the mucosa, the liver, and the antitoxic glands. Of these the liver destroys two-thirds of the digestive-tract poisons which pass through the mucosa as alkaloids and ammoniacal compounds. The mucosa is, however, the chief of defenses, as it modifies the colloids, the albumoses, and the toxins.

Third, the antitoxic glands. These comprise the glands of internal secretion and those of elimination.

Anderson and Rosenau¹¹, writing upon anaphylaxis, affirm that the whole problem of protein metabolism seems to be an adjustment in the sense of a defense. Foreign proteins do violence to the body when one ten-millionth part of a gram is injected a second time within five to ten days. Fortunately, however, sensitization is not so great when the protein is introduced by way of the digestive canal. The difference is one of degree only, because a line of defense is present in the canal and absent in the bloodstream.

It is well known that an individual unaccustomed to any one of the foods rich in protein, like cheese, eggs, meat, beans, nuts, etc., may

eat safely one hearty meal, but a second feast of the same protein makes him ill or creates a most decided disgust for the same; yet, if sufficient time has been allowed before repeating the meal no sensitization is observed, and in due time liberal quantities of the protein can be ingested, not only with safety, but with positive development of powers of immunity. The vegetarian is promptly sickened by a change to a liberal and continuous meat diet.

The baffling problems of feeding during the weaning period are completely solved by observing the rules against anaphylaxis, which provides for immunity by feeding the new protein in small amounts at intervals of ten or more days until sensitization is corrected. The same procedure must be followed in feeding fat and carbohydrate not because of true sensitization, but because quantity and quality of enzymic secretion must be developed somewhat gradually.

It would seem that a law of parallels governs as regards food limitation and immunity limitation. The simple statement of the converse is, that an individual feeding on a mixed diet should have the highest degree of immunity. If an infant is breast-fed too long its immunity is lowered. The diabetic will not tolerate fat and protein only; he must have at least 80 to 100 grams of carbohydrate in his twenty-four-hour ration. In just the same way that cell resistance is developed against invading organisms, digestibility is probably obtained for the foods which were indigestible and poisonous. A little care and patience will demonstrate that any kind of food can be given if time enough is permitted for immunity development.

A luxury-consumption diet, which means an amount of food above the body's caloric needs, can and should be given a great class of our patients who are underfed. To this class belong most of our neurasthenics, neurotics, and chronically thin people.

Another class should have special mention, namely, nursing mothers. The large majority of this class undertake full house-duties in three to four weeks after confinement, in addition to supplying food for the infant. A calculation of the combined weights of mother and child demonstrates that an increase of twenty-five per cent or more in the mother's food is required.

In the foregoing classes there is need of a rule for a marked increase in the fats and water. It is often a difficult task to successfully use the desired amount of each. If, however, the fats of

lowest melting-temperature are selected and cleverly disguised, from 100 to 150 grams can be easily given in twenty-four hours. If water is taken when the stomach is empty and not closer than one hour to one-half hour before food little or no disturbance of the stomach results.

Von Noorden¹² has pointed out a class of cases with normal red-cell counts, but, nevertheless, possessed of mass anemia or atrophy of blood-cells because of insufficient water for their chemical and physical activity. It should be remembered that each body cell is essentially aquatic and that 2,000 c. c. (4 pints) are ordinarily required in twenty-four hours. Half of this amount should be exclusive of food.

It is significant that, physiologically considered, constipation is perhaps more often due to insufficient water than to any other single cause.

The small intestine has a balanced exchange of fluid, but the large intestine is subject to constant absorption or withdrawal of its fluids. If an inadequate supply is brought to this area to supply its physiological needs the fecal remains must be unduly dry and harder to deject.

In conclusion, a plea is made for, first, a closer study of the physiology of the digestive canal; second, the acquirement of at least the same working knowledge of food-principles that we give the drugs; third, that an approximate estimate of the prescribed food values for twenty-four hours shall be made in accordance with the body-weight; fourth, the prevention of disease by the development of cell-resistance through the highest attainable state of nutrition.

BIBLIOGRAPHY

1. Musser and Kelly; Practice, page 145.
2. Langworthy's Charts U. S. Department of Agriculture.
3. Arnold's Tufts M. D. C.—W. B. Saunders Co.
4. Sahl's Diagnostic Methods, 2d Edition, p. 26.
5. Zeits. f. Biol., p. 263.
6. Combe: Autointoxication, p. 69.
7. Crile of Cleveland: Address at D. M. C. A. A., May, 1911.
8. Metchnikoff: Immunity in Infective Diseases, p. 556.
9. Garcia: Zeits. f. Phys., Chap. XVII, p. 568.
10. Combe: Autointoxication, p. 67.
11. Anderson and Rosenau: The Archives of Int. Med.,

DISCUSSION

THE PRESIDENT: This paper is one that appeals not only to the general practitioner, but to the specialist as well. One of the most important problems that confront the physician is the diet of his patients and to have that diet a proper one. I think so far as the general practitioner is concerned it is of more importance to give the patient the proper diet than it is to give him medicine.

I wish the time might be taken at present to discuss this paper thoroughly, and particularly to ask Dr. Davis questions, which, I am sure, he will be glad to answer.

DR. H. W. SHERWOOD (Doland): This is certainly a very interesting paper and one covering a very im-

portant field. I think children are weaned a great deal more easily and become more readily accustomed to the change of food if they are brought to it gradually. I think they should be gradually accustomed to any radical change in feeding.

Another thing of considerable interest to me, is the feeding of nursing mothers. I think that is something which is greatly neglected, and people in general do not consider the mother enough. Of course, we often hear women discuss among themselves what to eat to make more milk. One will recommend one thing, and another will recommend something else, but they generally recommend some sloppy food to make milk for infants. I tell the women if they had a cow which they wanted to give a lot of milk they would not feed her all kinds of swill to increase the flow of milk, but they would give her a good ration of grain and hay; and the same is true with woman; if they will eat the proper food there will be a good milk supply.

There is one question I would like to ask in regard to this carmine capsule. I did not quite understand the purpose of the carmine capsule.

DR. C. M. HOLLISTER (Pierre): I would like to ask Dr. Davis to say something as to the normal diet in typhoid fever.

DR. P. R. BURKLAND (Vermillion): I would like to ask if Dr. Davis is not of the opinion that the majority of adults eat too much. Having acquired the habit of eating during the growing period, do we not continue to eat too much after we have attained our growth? I ask that as a general question. I understand that a man who does hard physical labor must have more food units than the one who leads a sedentary life.

PROF. MORTIMER HERZBERG (Vermillion): Is the caloric value of food based on its chemical makeup, or is it based upon the digestive nutriment it contains? A great deal of food taken into the body is not assimilated, and it seems to me the caloric value of food should be based upon the food which is absorbed.

DR. W. G. SMITH (Sturgis): In my travels about the country I have met with physicians who believe that the improved process of making flour has had something to do with the increase of appendicitis. The Government has been investigating the different processes of making flour, and in view of the investigations made by Dr. Davis I would like to ask him whether his investigations have led him to believe that there is any connection between the increase of appendicitis and the improved process employed in the manufacture of flour.

DR. C. E. McCauley (Aberdeen): I would like to ask the doctor in regard to the amount of food, particularly bread, to be fed patients. I have great difficulty in that, because we may want to give them a slice or two slices of bread, but one slice may be half an inch thick while another may be an inch in thickness. In what way shall we give them the amount of bread they ought to have?

DR. DAVIS (Essayist): In regard to nursing mothers: I think that is an important matter. Although no question has been asked I want to say a word on that subject. I just called your attention to the fact that each ounce of milk has a caloric value of 20. That is to say, if we burn up the energy-giving portion of the

milk it will yield 20 calories. I simply take this to illustrate something I want to say now. In an ordinary glass of milk we have 160 calories, or eight times twenty. Hardly any woman will have difficulty in taking four glasses of milk a day; that would be four times 160, or 640 calories contained in that amount of milk. Now, supposing a baby weighs 10 pounds. We calculate that ordinarily a baby should have 40 to 55 calories per pound of body-weight. Supposing we take 40 as an illustration. The baby weighs 10 pounds, and requires 40 calories per pound of body-weight. Ten times 40 is the number of calories required to support the baby twenty-four hours. If the mother drinks much milk over and above her ordinary diet she is taking more than enough to supply the child. I use that as an illustration in feeding mothers. It is my habit to give food somewhat above the caloric needs in nursing mothers. I have advised mothers to take a drink of milk and gruel as soon as they wake up in the morning, probably one or two hours before breakfast; then have breakfast; and about half past ten take a bowl of milk and gruel; then have dinner or lunch; and in the afternoon perhaps a little fruit juice, or, if it is not desired or not liked, a light broth or bouillon, and just before going to bed a light luncheon of rice gruel or any kind of cereal. Following out a little program like this will give more than the child or the mother will require for her body needs and the body needs of the child.

In regard to the use of the carmine: When you begin the Schmidt test diet you give a carmine capsule, and when the carmine passes in the stool that marks the beginning of the test. You give one at the end of the period so that you may know when the Schmidt test-diet is ended. It is simply given for the purpose of isolating the stools in the Schmidt test-diet.

In regard to feeding typhoid-fever patients: An hour could be taken in discussing that feature. I am distinctly on the side of liberal feeding in typhoid fever. I cannot say that I go as far as Coleman in recommending feeding more than in health, although the series of cases reported by him gave excellent results, but in my experience I have found that my patients do well on a diet of 1,800 to 2,000 calories made up as largely as possible of fat. Butter may be placed in almost all kinds of food you give in typhoid fever, since butter has a high caloric value. Each gram of pure fat has a caloric value of 9.3-10, while protein has a value of 4.1-10 only.

In regard to the cause of fermentation in typhoid: My observation is that the cause of fermentation lies largely in the feeding of meat juices,—I mean in a great many instances. You feed meat juices and you have a protein putrefaction. If you feed a little too much protein in typhoid you get a great gaseous distension. I would lower the protein, and by doing that I believe we lower the production of gas.

The question was asked whether we ordinarily eat too much. Taking the entire human race as a whole, I believe they eat too little. If we compare our home communities I believe they eat too much. Perhaps they do not eat too much of the right kind of food, but I believe they eat invariably too much protein. It is very easy to exceed 116 to 118 grams of protein in twenty-four hours,—a very easy thing.

In regard to the caloric value of food: You all know that the value of food is determined by burning

food in a calorimeter and measuring the heat energy given off. Very extensive experiments and observations have been made, and it has been demonstrated that the disposition of food within the body is exactly the same as it is in the calorimeter. Of course, we have to take into account that body process must be acting normally, that is, the functions of the body must be performed normally. We give a definite amount of fat and then examine the stool to find out what definite amount of food the individual can take care of.

The amount of bread to be used in the daily food allowance is easily estimated. An ordinary slice of bread weighing one ounce has a value of 80 calories, and this represents approximately 1-25 of the carbohydrate needs for a day. The average individual uses about two slices of bread per meal, or six per day, which yield 480 calories, or nearly one-fourth of the 2050 calories contained in the carbohydrate content in the diet of natural selection. The remain-

ing number of calories he prefers to make up with vegetables, cakes, puddings, pies, cereals, etc. It is obvious therefore, that we can vary the quantity of bread at will so long as we consider the caloric value, appetite, and clinical indications when feeding the sick.

In regard to the milling process of flour: I do not know that any reliable work has been done to show that the improved milling of cereals is the cause of the increase of appendicitis. However, I think there is very good scientific evidence that constipation is one of the most frequent causes of appendicitis. To go back to the original question: If we remove from the diet the larger part of the indigestible portion of the food we have nothing left to stimulate the peristaltic action and the result is we have no peristalsis. I would say that the finer milling processes in removing the more digestible portions of the cereal might be an indirect contributing cause.

I thank you for your remarks and for your attention.

A METHOD OF ENUCLEATION BY WHICH*THE ACTION AND EFFICIENCY OF THE ORBITAL MUSCLES ARE BETTER CONSERVED*

BY L. W. MECKSTROTH, M. D.

WAHPETON, N. D.

Being a worker in the general field of medicine and surgery, it is, I hope, not without due modesty and sufficient realization of my trespass within the domain of the eye specialist that I venture to present a paper on the above subject, although my limited experience with it can lend but little weight of authority.

In my variegated practice it has been my lot to do an occasional enucleation of the eye, and it has occurred to me that in the ordinary enucleation, simply allowing the orbital muscles to fall back into the orbit and take their attachment where they happened to, or attaching them to the conjunctiva by any method I had ever seen described, was a greater waste of muscle-efficiency than should be necessary, the ideal being, in my mind, to have the tendon ends attach to a point which will bring them just at the periphery of the artificial eye when this is later inserted, thus preventing the muscles from spending their functions in an aimless retraction into the orbital cavity, by anchoring their insertions forward to a point opposite their normal insertion in the eyeball and applying their mechanics to the movement of the artificial eye in the most economical and effective manner.

To this end, in my last enucleation I attached

the recti muscles to the fornix or oculopalpebral fold of the conjunctiva with results, in natural appearance, and the ability of the ocular muscles to transmit motion to the artificial eye, far excelling anything I had previously seen either in my own or others' cases.

A brief review of pertinent anatomical facts will aid in keeping clearly in mind the principles involved. The structures to be considered are the four recti muscles, the superior and inferior oblique, and the levator palpebrarum, the capsule of Tenon and the conjunctiva.

The tendons of the recti muscle pass through, and are loosely attached to, the capsule of Tenon. The capsule of Tenon being further attached by fibrous tissue to the fascia surrounding the orbit, helps, in the ordinary enucleation, to keep the recti muscles in their relative positions, but does not prevent them from retracting completely.

The oblique muscles are, as their name indicates, applied to the eyeball in an oblique direction from the inner part of the orbit outward and backward. Their action on the eyeball, however, is not in this direction, but at right-angles with, and causing a rotation of, the eye on its anteroposterior or visual axis. It is difficult to understand the reason for this oblique insertion unless it is to overcome some interference to their action by a drag on the recti muscles. They

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

may also be designed to hold the eyeball forward and, in a state of rest, overcome the combined tonus of the recti muscles. For the purpose in hand, however, by uniting their several ends they may be made to act like a sling holding the capsule forward, thus relieving the tension on the recti tendons and helping to maintain the fullness of the eye.

The levator of the upper lid normally acts in unison with the superior rectus; when the eye turns to look downward the lid follows and keeps the same relation with the cornea. This movement is very often imperfectly preserved in the artificial member after an enucleation by the old method, and a close imitation of this

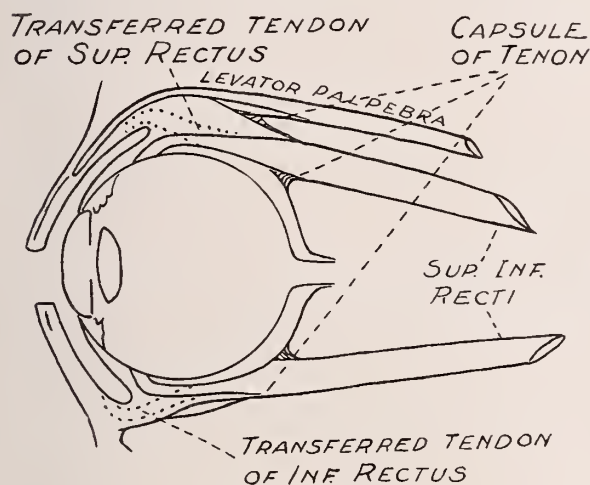


Fig. 1. Schematic sagittal section through the eyeball and the recti muscles, showing the relations with the capsule and the levator palpebrae, and the point on fornix to which the tendon is transplanted.

eye and lid movement is as important as that of the other movements of the eyeball.

By the attachment of the superior and inferior recti muscles to the superior and inferior fornix of the conjunctiva the inferior rectus in turning the eye to look downward pulls on the inferior fornix, and with it draws downward the lower edge of the artificial eye, the superior rectus and levator palpebrarum relaxing at the same time, allowing the superior fornix with the edge of the artificial eye to descend, the excursions of the upper lid following those of the cornea, as with the natural eye.

The fornix of the conjunctiva lays well over the insertions of the recti tendons. Fig. 1 will show more clearly than can be explained how simple it is to transpose the tendon from its attachment to the eyeball to the outer surface of the fornix. An exception must be made of the

inner fornix, which exists only when the eye turns inward; when the eye is abducted it is represented by the semilunar fold, and it is to the semilunar fold that the internal rectus is attached.

In replacing the natural with an artificial eye, we are replacing less than half as much material as we took away, naturally the eye and lid must either sink in or, assuming that the glass eye just about fills the conjunctival pouch, something must fill in the space between the conjunctival pouch and the capsule. Probably both take place in varying proportions, the post-conjunctival space filling with organized blood-clot and the eye and lids sinking into the orbit in proportion

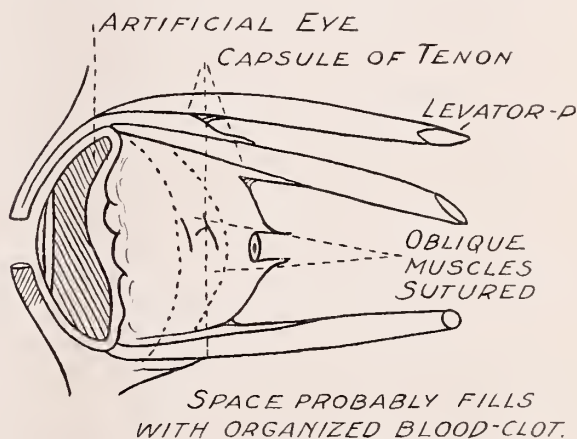


Fig. 2. Schematic sagittal section through stump after enucleation, and the insertion of the artificial eye, showing the manner in which the tendons are applied to the periphery of the artificial eye, and also the position of capsule of Tenon. It is difficult to illustrate in this cut the position of the oblique tendons, but they draw on the capsule from about its center forward and inward.

to the distance the tendons and capsules are permitted to retract.

Keeping in view the foregoing principles, it is the aim to have the recti muscles, when the artificial eye is inserted, stretched out to their full length, with the tendons inserted as near their original points of insertion as possible, preserving their normal range of contraction and normal line of action, at the same time anchoring the adjacent capsule or fascia in the same position, namely, the fornix of the conjunctiva, the artificial eye being slung or grasped, as it were, between the diverging recti tendons from behind, and the diverging inner surface of the lids from in front and backed by the new soft connective tissue between the capsule and conjunctival pouch, which conforms its contour to that of the back of the artificial eye, and on which the artificial eye rides as one segment of a sphere

upon another. The superior rectus retains its relation with the levator palpebrae, making the excursions of the upper lid correspond with the vertical movement of the cornea. The oblique muscles are retained in their attachment to the capsule, thereby helping to hold the capsule forward and to preserve the normal fullness of the eye.

The technic which I have followed and which may be varied and no doubt improved, is as follows:

The conjunctiva after being circumcised close to the cornea, is freed by blunt dissection to and a trifle beyond the crest of the fornix. The fascia of the eyeball is next dissected from the sclera, from as far forward as it can be differentiated, up to and around and between the tendons, care being taken not to disturb the attachment of the fascia or capsule to the tendons. No. 2 plain catgut, after passing through the crest of the fornix from the mucous surface (a trifle anterior to the crest in the superior and inferior fornix), is drawn through the tendon near its insertion, tucking up a liberal amount of fascia on either side of the tendon, after which it is returned through the conjunctiva, about an eighth of an inch to its point of entrance. The tendon is then raised, and shaved close to the sclera, making as broad a severed surface as possible. After each of the recti tendons has been dealt with in this manner, and the catgut left untied till the eye is removed, the dissection is continued back and under the muscles, keeping close to the sclera, and dissecting up to the oblique muscles, but not disturbing their insertions. On the nasal side the denudation of the sclera can be carried clear to the optic nerve which is severed from this side close to the fundus. The eyeball can now be drawn out. The oblique tendons, each transfixed with catgut, are severed close to the sclera, the remainder of the capsule is denuded from the fundus, and the eye is removed. The oblique tendon ends are brought together by one or two turns of the catgut. The catgut loops, passing through the recti tendons, are now drawn up and tied on the mucous side of the conjunctiva. The opening in the conjunctiva is closed by a horizontal suture-line of two or three interrupted catgut sutures.

In a week after enucleation an improved Snellen eye is inserted, at first for short periods.

I believe, in soundness of principles and results, this method excels all others, even the much-mourned Mules' operation, at its best, in

which we have practically a ball working in a socket, and the ball trying to rub the socket or artificial eye around with it, incurring too much loss of motion.

In the scheme which I have described we have the principle of the eye resting on, and practically clamped to, a disc, which disc is tilted in different directions by the action of the recti, attached at its periphery and retaining their full range of action.

In conclusion, I have simply to repeat that my experience has convinced me that the procedure is founded on correct principles, and when properly carried out will not be disappointing in showing considerable improvement over the results following the ordinary enucleation. I submit it to the profession for their proof, approval, and improvement.

DISCUSSION

Dr. H. A. Beaudoux (St. Paul): I would very much like to be able to say something in regard to Dr. Meckstroth's idea of making a suitable socket for a movable eye, but I fear that I may not have understood his scheme thoroughly. If what I understood is correct, however, it does not appeal to me, mechanically speaking, on soft tissues. If he were dealing with a metallic cone instead of one formed of muscles and soft tissues, it might have some mechanical value. A rigid cone fitted over a glass ball might be so adjusted that when the base of the cone is moved in one direction, the glass ball could be compelled to move in the opposite direction, but how such conditions can be obtained with muscles, fascia, etc., I cannot very well conceive, for, on the other hand, there would seem to be no possible motility to induce the eye to rotate save the slight contractions of muscles which would be reduced to a minimum on account of the new point of insertion which the doctor has given to each and every one and the impossibility to change the line of direction in which each muscle acts.

I have enjoyed the doctor's paper and his experimental enthusiasm, and if I have understood him properly, I should have to look into the subject more thoroughly before I should care to attempt it on any of my patients. It seems to lack, in my opinion, dynamic as well as functional correlation.

Dr. Meckstroth (Essayist): The mechanical procedure aimed at in this enucleation is to keep the tendon-ends as far forward as possible and allow the muscles to assume their normal position, or as near the natural position as possible, which should produce the opposite of atrophy. I think muscles atrophy, especially where they are allowed to retract from their point of insertion. They atrophy and they are of little use anyway, unless their normal length is preserved. One criticism of the subject, which I looked for and which I did not get incorporated in the paper, was the question of the ability of the eyelids to close properly over the glass eye, on account of the superior rectus being

attached to the fornix, which was a question in my mind until I saw it work properly. I think if too large an eye was put in it might interfere with the closing of the eye.

Another thing I wish to bring out more clearly is that it is not so much a question of mobility of the eye itself, as that the lid move in unison with the eye and the lids close completely over the eye. You

see a person with one winking eye normally and the other staring, and you can tell at a glance it is an artificial eye by the immobility of the upper lid. By this particular method of operating I believe we maintain the normal relation between the superior rectus muscle and the levator muscle of the upper lid, as well as increase the range of movement of the artificial eye.

THE FIRST SURGICAL CLINIC IN THE NEW HOSPITAL OF THE STATE UNIVERSITY*

The opening surgical clinic of the new University Hospital was held September 28, 1911, by Dr. James E. Moore, chief of the Department of Surgery, before the combined Junior and Senior classes of the College of Medicine.

The first case presented was that of a girl, K. C., aged 23, white, referred by Dr. Strickler, of New Ulm, Minn.

This girl gives a history of having been jaundiced with tenderness in the gall-bladder region a year ago; also of having had repeated attacks of appendicitis for nine years. The last attack occurred three weeks ago, at which time she was exceedingly tender, and had pain at McBurney's point. She also had a temperature and some muscle rigidity.

Present examination reveals, on deep pressure, tenderness in her appendicular region, also tenderness in her right ovarian region, and very slight tenderness in the region of her gall-bladder. This girl is a virgin, and, therefore bimanual examination was made by the rectal route and a tender enlarged right ovary found. Her white-blood count is 8,000 and her hemoglobin is 85 per cent. Her kidneys are normal.

The diagnosis is that of chronic appendicitis, with a cystic right ovary.

The operative field of the abdomen was prepared the night before by being shaved and scrubbed with soap and water; then dry sterile dressings were applied. An hour before she was brought to the anesthetizing room, this field was painted with tincture of iodine diluted one-half with alcohol. Sterile dressings were applied and left on. This method of preparation permits her to go upon the operating-table dry, warm, and ready for operation. At the time her abdomen was prepared, she was given a hypodermic of 1/6 grain of morphine with 1/150 grain of atropine. Ether was the anesthetic used.

Her history of pelvic, appendicular, and gall-bladder tenderness dictates the incision. In this instance, as it was desired to explore these regions, a right rectus incision was made, large enough to permit of introducing the entire hand within the abdomen, so that all organs within this cavity could be properly examined. Reference was made to the small incisions advocated by some operators. These were condemned as being unnecessary and not permitting a proper examination to be made.

Her right ovary was cystic. This organ was drawn up, and the cysts punctured, after which it was returned to the pelvis. All other pelvic organs were normal.

Her gall-bladder was surrounded by many fine cobweb adhesions, which suggest an old cholecystitis. The bladder was normal in color and emptied readily, showing that the ducts were patulous. There was considerable ptosis of the stomach and transverse colon; and the cecum was freely movable to the median line, having a very long mesocolon. The right kidney was lower than normal and was freely movable. Attention was called by Dr. Moore to the many operations devised for the correction of visceroptosis. He spoke of them simply to deprecate their use, affirming that practically all the treatment these cases required, was an intelligently regulated diet, posture, and a properly fitted abdominal belt or binder, this being all that was warranted or necessary.

The cecum was markedly injected. The appendix was freely movable, five inches long, congested, and clubbed at the end,—a typical chronically inflamed appendix. After ligation with catgut of its meso-appendix, the appendix was cut away from the latter. A purse-string suture of iodized catgut was applied to the base of the appendix in the cecal wall. The appendix was ligated just above its base with the same kind of gut, and just above this ligature a

* Reported by Arthur A. Law, M. D., Assistant and Chief of the Dept. of Surgery of the University Hospital.

Kelly's forceps was clamped. The field was carefully protected with sterile-gauze sponges, and the appendix was cut away between the forceps and the ligature. The stump of the appendix was now touched with pure carbolic acid, followed by alcohol, inverted into the cecum, and the purse-string suture was tied. The stump of the meso-appendix was now sutured over this area, the cecum was dropped back into the peritoneal cavity, and the mesentery pulled down over it. The wound was closed in tiers by means of iodized catgut.

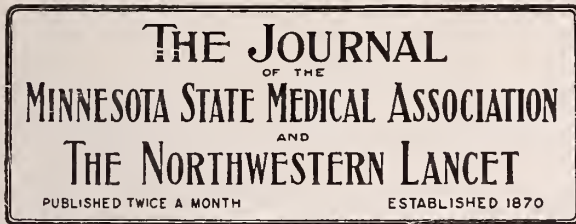
This patient will be permitted to get out of bed after the seventh day.

The next case presented was that of a quarter-blood Indian boy, R. B., 17 years of age. He was referred by Dr. A. C. Tanner of Federal Dam, Minn.

Two years ago this boy sustained a fracture of the leg. Two weeks later while in hospital and hopping about on his left leg, he began to have trouble with his left thigh, with pain of a severe, boring, excruciating character, with swelling and redness, and accompanied by fever and chills. Dr. Moore opened his thigh and liberated considerable pus. Sinuses have persisted since, which discharge freely. At the present time there is to be seen, just above his left knee on the anterior surface of the thigh, an annular piece of necrotic bone projecting through the skin. The joint itself is considerably swollen, although there is no sense of fluctuation,

and no crepitation or pain on motion. The joint is not involved other than that there is a direct extension of inflammation from the disease in the diaphesis. There is 75% of motion. His leucocyte count is 12,000 and his hemoglobin 85 per cent.

This is unquestionably a case of osteomyelitis of the femur. We know that this disease is produced originally by an infection from pyogenic bacteria, which invade primarily the medullary canal. The rapid onset, this sequestrum, the clinical history, and the primary trouble in the diaphesis, all lead us to arrive at this conclusion. The inroads of the disease have, to a certain extent, been checked by Nature, who is now trying to extrude the lime-bearing remnants of the diaphesis. The periosteum has produced a new shaft or involucrum that surrounds this dead sequestrum, which, as is shown, is rather tightly wedged in this new bone. Incision about this sequestrum permitted of its removal with great difficulty. The cavity in the involucrum, from which it comes, was curetted with a sharp spoon and drained by a wick of plain gauze. In this instance bone-wax was not used. The bone-cavity was so foul and the tissues about the sequestrum so much infected, it was thought best to dress this defect with gauze and balsam of Peru until healthy granulations should start to line the cavity. When this occurs bone-wax will be poured into this area, which will be permitted to granulate up over the same.



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Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR
Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

DECEMBER 1, 1911

BABINSKI SIGN IN THREATENED UREMIA

Some years ago Babinski described a condition known as the great-toe phenomenon. This sign is elicited by stroking the inner sole of the foot, the result being an extension of the great toe. Usually, the other toes do not participate in the reflex, but if present the extension of the great toe is more evident, and its extensor excursion is far greater than that of the other toes. This sign has been considered as pathognomonic of a disease of the cerebral motor cortex or of the underlying bundle of nerves which arise in the cortex and extend through the brain on their way to the spinal cord. The sign may be present in other diseases in the brain which in some way involve, by pressure or irritation, the pyramidal or motor pathway. It has also been found occasionally in spinal-cord disease and may be present in certain so-called hysterical states.

According to Curschmann, in the *Münchener Medizinische Wochenschrift* for September, the Babinski sign is a valuable diagnostic and prognostic index in morbid conditions preceding the uremia syndrome. Other reflexes may be modified, abolished, or exaggerated, but the Babinski is permanent, and is positive from the start. Curschmann called the attention of the profession to this fact several years ago, but it

was either not received with favor or was persistently overlooked.

The author, in his recent paper, cites the case of a boy 10 years old who had an acute nephritis, but an unimpaired consciousness. The tendon reflexes were abnormally weak, and the abdominal wall reflex was abolished, but the Babinski was present in both feet. On these facts prophylactic treatment was instituted; venesection, saline infusion, and heart tonics were administered. Sixteen or eighteen hours later the uremia made itself known by convulsions. The boy recovered from his attacks and the Babinski disappeared.

This characteristic may be found in many forms of nephritis, acute or chronic, in which uremia may develop. No matter how the other reflexes behave, the Babinski is the danger signal and gives its warnings hours before an attack of convulsions.

Those forms of nephritis, associated with edema, are more inclined to demonstrate the Babinski sign than nephritis without edema.

The theory on which Curschmann bases his conclusion, is the presence of a toxic state affecting the cortical cells and the consequent loss of cerebral inhibition. It is now well known that hemiplegia may take place during the course of a nephritis without gross lesions in the brain. If the conditions continue over a long period there is evidence of a local edema and congestion of areas in the brain sufficient to cause loss of power in the muscles on the opposite side of the body. This new suggestion is of the greatest importance in anticipating preventable dangers.

Apparently, little has been written on this subject, and as it is a matter of easy observation it can be studied with interest. Any sign that anticipates a uremia convulsion is worthy of careful analysis by the general practitioner. Too often a convulsion comes without warning, and if this sign is reliable it may save many a victim from a dangerous attack.

THE PHYSICIAN AND HIS OPPORTUNITIES

There is no other profession that possesses the opportunity for power and influence that comes to medical men when they choose to exert it in the right direction. Their ability for good lies within themselves and is founded on inherent or acquired personality, merit, and character. Other professional men attain greatness and

prominence, but to the physician, with the close relationship that exists between him and his patient, there is something that cannot be estimated except by the knowledge of a professional and personal service rendered to others. The physician stands in a special and particular attitude to public service. He is more than a physician in the home and not infrequently becomes as a member of the family. In order that this relationship be preserved he must establish a confidence that is of the highest type. He is trusted beyond ordinary limits, and, in return, he gives the best that is in him as advisor, mediator, and friend.

Occasionally, perhaps too often, he assumes too much and fails to maintain his supposedly high standard as a man; his weakness is apparent and his confidential manner violates the principles that he is sworn to uphold. Frequently, he is misunderstood by unthinking people and he is relegated to oblivion as far as his families are concerned, but, as a rule, if he adheres to the unwritten laws that govern conduct and sympathy, his position remains unshaken. The attitude of all medical men to all classes should not vary as unusual conditions demand.

The man who is generous, broad-minded, and liberal with his time and services has thrust upon himself opportunities for immeasurable good, and that, in turn, makes him popular, famous, or successful, according to the way the world sees him. Many a medical man begins his career with good intention, but is shunted from one plane to another, sometimes unwillingly, sometimes helplessly, and at times deliberately. His career and his end depend upon his ability and his environment. He may lack balance or be indifferent to his medical advancement, but, if he sees his path and follows it by hard work and determination, he rarely fails to reach his destination.

Dr. Albert A. Ames who died last week was a curious character in some ways, but everyone who knew him knew that his popularity was due largely to his kindness of heart and his willingness to do something for the unworthy, as well as for the worthy.

Dr. Alonzo A. Ames who died last week was a surgeon and physician, and he gave freely of his time, service, and medicine, and frequently of his money, to all who applied for aid. The result of his big-heartedness was a large following of the poor, who flocked to his doors and who credited

him with fame and popularity. His response to the call from politicians led him away from medicine into an uncertain field where he became the idol of the lower and middle classes. He went down on the historical page as a politician, and as a result of his benign generosity he eventually lost much that he had gained; and he finally disappeared from the political horizon. Much of his work went for naught; his old-time friends deserted him and he again attempted to enter the field of medicine. Those who had worshipped him in the early day clung to him latterly because they remembered how good he was to them in times of distress.

There are many such instances in medicine, and it depends entirely upon the man where he finally lands. Every successful medical man must work among the poor in order to obtain opportunity for experience, and his rise from his self-imposed position depends upon many factors. As the man goes up the medical scale others are ready to take his place, and the work of caring for the poor sick is a progressive step with a brighter and better professional prospect ahead. No man loses a point who begins at the bottom and who combines charity, gentleness, kindness, and willingness to work and learn. Of such stuff are real men made, and they are the men of power and influence in every community, and if they would they could direct and secure remedial measures that would benefit the general public.

NEWSPAPER SENSATIONALISM

For a number of years an institution known as "Mollan's Hospital," has been maintained in Minneapolis for the care and treatment of a class of mental cases not properly provided for by any other institution in the state. The managers of the hospital, Mrs. Mollan and, upon her death, her daughter, made but a fair living out of their exacting work, and the physicians who had patients there were doing much charitable work. The building no doubt lacked some modern features of fire protection, as do many buildings of even recent construction, but the manager was always willing to comply with the requirements of city ordinances. Probably through the influence of neighbors who look upon hospitals of any kind as nuisances, especially in their neighborhood, a great commotion was raised, and Miss Mollan was arrested. There was a sensation for the newspapers, and the most was made of it

—with big-type scare-heads. She was promptly acquitted, and every suggestion made by the building inspector was carried out. These two important facts received only the briefest notice in the papers, and the business of Miss Mollan was ruined. This is the price paid for the style of newspaper demanded by the American people, and it will probably be paid by the individual and the public for many years to come.

The name of the institution has been changed to the "South Side Hospital," and the editor of THE JOURNAL-LANCET has assumed the financial responsibility of the management, not as a matter of profitable investment, but because he believes its maintenance is absolutely required by public interests.

BOOK NOTICES

PRACTICAL MEDICINE SERIES. By Gustavus P. Head, M. D., and Charles L. Mix, A. M., M. D. Volume IV. Gynecology, by Emilius C. Dudley, A. M., M. D., and C. von Bachellé, M. S., M. D. Series 1911. The Year Book Publishers, Chicago. Price \$1.25.

The purpose of this publication is to give the reader a concise and accurate review of the advances in gynecology during 1910. The abstracts of the literature are supplemented by the valuable opinions of the editors.

The book is divided into six parts. In Part I miscellaneous topics are taken up under the title of "general principles." One of the interesting things considered is "endopelvoscopy." The diagnostic possibilities of this method of examination are considerable, but it is even more complicated than cystoscopy and the allied methods of examination.

Part II is devoted to "Infections and Allied Disorders." This is well worth reading and presents many valuable facts.

Part III, on "Malformations and Tumors," takes up the principal neoplasms, and many practical points are presented.

The "Traumatism," considered in Part IV, are of importance to every one who practices obstetrics, and some of the other rarer injuries are brought to mind.

Part V, which considers "Displacements," is one of the most valuable in the book and might be read with profit, not only by the general practitioner, but by ambitious surgeons. The ardor of the latter might possibly be somewhat

dampened by careful consideration of some of the arguments which are presented.

"The Disorders of Menstruation and Sterility" are considered in Part VI. The portion devoted to a consideration of the relation of tuberculosis to menstruation is both instructive and interesting.

Some very good plates add to the appearance and value of the book in making the description of the operations more lucid. The type is clear, but the proof-reading might have been more carefully done.

COLLECTED PAPERS BY THE STAFF OF ST. MARY'S HOSPITAL-MAYO CLINIC, 1905-1909. W. B. Saunders Co., Philadelphia and London, 1911. Cloth, 668 pages.

Not the least valuable part of this excellent book is the careful index of the subjects treated. The technic of methods used at Rochester is given with a detail which shows plainly that the readers of the various papers were endeavoring to make their meaning so clear and definite as to assure interest and discussion.

Not only is the technic explicit, but it is backed by reasons,—mechanical, anatomical and surgical.

Differential diagnosis is taken up whenever possible, and the history of every method is told.

The detail in histology and pathology from the laboratory reports will be of vast interest to many men who love to follow an operation by microscopic study.

Laboratory technic, operating-room technic, anesthetics, and physical examination papers round out in full what one, perhaps not a surgeon, might think a mere recital of different operations.

The fact that the material between the covers was written with no thought of writing a book takes away every vestige of text-book tone and makes it read like a letter from an old and experienced friend to his young and eager contemporary.

INEBRIETY. By T. D. Crothers, M. D. Harvey Publishing Co., Cincinnati, Ohio, 1911.

No other man in America has pursued the study of inebriety with such persistence, or has contributed to the literature of the subject so much, as has Dr. Crothers. In his work as editor of *The Journal of Inebriety*, which he has carried on for over thirty years, he has been a frequent contributor, and his thirty-six years' experience in institutional work with inebriates

has given him a clinical experience probably unrivaled in this country. The present volume is an attempt to put his accumulated data into such form as will be available for general use.

One of the points made by the author with the utmost insistence, is, that "inebriety is not a moral disorder, but a distinct neurosis and psychosis, preventable and curable by the use of physical and psychical means and measures," and "with the same certainty as in germ diseases."

Many interesting facts concerning the history of drinking are brought out; for example, we learn that many centuries ago a town in Egypt called Quede became famous through the same product which has immortalized Milwaukee. Liquor seems to have been used with a lavishness unknown at the present day, and on one occasion a king made a sacrificial offering of 200,000 jars of wine and 500,000 jugs of beer. The injurious effects of the use of liquor were much the same as now, and many attempts at reform were made, but these were spasmodic. Very much as it is now with us with our mayors, a monarch who was a total abstainer kept the lid on, and when the monarch was a drinker everything ran wide open. Religious banquets were at one time suppressed because they led to drunkenness, and pure-food laws were evidently needed, for there was repeated complaint of the adulteration of liquors.

The author divides inebriety into three classes: first, those with a long period of drinking; second, those who use spirits irregularly; third, periodical drinkers. Periodical drinking is relatively more common in America than elsewhere, and the period of moderate drinking with all drinkers is shorter.

Lack of responsibility on the part of the inebriate is insisted upon; and the statements that "no inebriate can be regarded as sane" and that "the fact that all persons who drink do not commit crime is largely a matter of accident, with very few exceptions," will be regarded by most men as exceedingly radical. As Crothers insists, amnesia among drinkers is by no means rare, but if one allows the claim of amnesia and lack of responsibility every time it may be set up for an act committed by any individual, under or not under the influence of liquor, provided only he be a drinker, punishment in courts will soon cease to be.

Treatment of inebriates is considered under the following heads: "General Principles of Treatment," "Home and Office Treatment of

Inebriates," "Institutional Treatment of Inebriates," "State Care and Treatment of Inebriates," "Treatment by Hot Air, Radiant Light Baths, Vibration and Electrical Currents," and "Mental Therapeutics and Suggestion in the Treatment of Inebriety."

The method employed by the author to break up the immediate craving for liquor is to use salines and a highly concentrated solution of quassia, of which latter he gives two ounces every two hours. The patient may use spirits with these if he desires, but in a very short time the desire for the spirits is replaced by a repugnance to its taste and smell.

As a whole, the book contains many interesting and valuable facts concerning inebriety, but it is not very carefully written, and many times contains generalized statements for which proof is not forthcoming and which probably cannot be proven.

Some experience in the treatment of inebriety makes the reviewer very skeptical of the statement that inebriates, taking them as they come, are curable with the same certainty as germ diseases.

NEWS ITEMS

Dr. H. P. Sawyer has moved from Goodhue to St. Paul.

Dr. M. O. Olsen, of Minot, N. D., has moved to Elgin, Ill.

Dr. Geo. E. Merrick, of Buffalo, N. Y., has located at Fairmont.

Dr. J. A. Hedding has moved from Hope, N. D., to Minneapolis.

Dr. W. H. Rumpf, of Faribault, has gone to Jamaica for his health.

Dr. R. E. Seitz has moved from Roundup, Mont., to Bozeman, Mont.

Dr. J. H. Ralston, who comes from Nebraska, has located at Hetland, S. D.

Dr. W. L. Palmer, of Albert Lea, is doing post-graduate work in Chicago.

The Mahon Memorial Hospital was opened last month at Culbertson, Montana.

Dr. J. A. Freeborn, of Fergus Falls, has gone to Europe for an extended course of study.

Dr. F. L. Adair, of Minneapolis, was married last month to Miss Myrtle Ingalls, also of Minneapolis.

Dr. G. G. Morehouse, of Owatonna, was married last month to Miss Margaret Moore, of the same place.

The Social Service Club of St. Paul has endorsed medical inspection in the St. Paul schools and urges its extension.

The citizens of Biwabik are pleased over the results of the first medical inspection done in the public schools of that city.

The new hospital at Hamilton, Montana, was formally opened last month. It has received generous donations from the citizens.

Drs. Benson & Brandon, of Jackson, have dissolved partnership, Dr. Benson retaining the firm's practice and the management of the firm's hospital.

Dr. Geo. F. Drew, of Crary, N. D., has moved to New Orleans, La. Dr. Drew is a graduate of the University of Minnesota, class of 1900.

Dr. C. J. Wallace, formerly of Superior, Wis., has been appointed surgeon of the steel plant at New Duluth. Dr. Wallace is a recent graduate of the State University.

Dr. John Evan Dewar, of Minneapolis, who has been studying abroad for two years, was elected in October a fellow of the Royal College of Surgeons of Edinburgh.

Dr. L. P. Leonard, of Minneapolis, and some friends have purchased 160 acres of land near Jordan, and they will conduct a sanitarium. There are five sulphur springs on their property.

The physicians of Mankato expect to have a branch laboratory of the State Board of Health located in that city. Duluth has a branch. A detention hospital will also probably be built by Mankato.

Dr. J. W. Miller, formerly connected with the State Hospital at Jamestown, N. D., has returned from Vienna, where he has been for the past six months. Dr. Miller will enter general practice.

Dr. Henry J. O'Brien, State University, '06, now of Posco, Washington, has been appointed head physician of the Washington State Industrial Insurance Commission by Gov. Hay, of Washington.

President Taft issued an order in October prohibiting anyone from practicing medicine, surgery, pharmacy, or dentistry in the Canal Zone without a license from the Board of Health of the Zone.

Dr. J. E. Engstad, of Grand Forks, N. D., has permanently located in Minneapolis, with offices at 216-218 Masonic temple. Dr. Engstad has done surgical work exclusively for a good many years.

The Minneapolis Park Board distributed 50,000 chrysanthemums last month to the various hospitals and charitable institutions of the city. This is an annual custom of the Park Board, and a beautiful one.

Dr. H. G. Irvine, of Minneapolis, has returned from a year's special work in Europe. He spent eight months in Vienna doing skin and genito-urinary work. He now has offices in the new Syndicate Block.

Dr. L. B. Wilson, of the Mayo Staff, Rochester, has returned from a four months' trip to Europe. Dr. Wilson spent his time in visiting the pathological laboratories of England, France, Austria, Germany, and Holland.

Dr. Christopher Graham, of the Mayo Staff, recently contributed funds for equipping a model room in a Rochester grade-school building along the lines suggested by Mrs. Crane. The result is so satisfactory that the Board of Education will at once equip other rooms along the same line.

The Black Hills (S. D.) District Medical Society met at Deadwood, S. D., last month. The following were elected officers for the current year: President, Dr. R. J. Jackson, Rapid City; vice-president, Dr. F. E. Clough, Leads; secretary, Dr. F. E. Aschcroft, Deadwood; treasurer, Dr. J. A. Crouch, Lead; delegate, Dr. J. W. Freeman, Lead.

Dr. Alonzo A. Ames, of Minneapolis, died last month at the age of 69. Dr. Ames lived in Minneapolis nearly sixty years. He graduated from Rush in 1862, served in the Civil War, was three times mayor of Minneapolis, and took an active part in state politics. Dr. Ames will be best and longest remembered by his long-continued and unselfish devotion to the poor sick of Minneapolis.

The following seniors medical students of the State University successfully passed the recent examination and will become internes in hospitals of St. Paul and Minneapolis upon graduation in June at the end of a six-year course: A. F. Bratrud, Warren, Minn.; W. C. Carroll, St. Paul; C. B. Drake, St. Paul; F. J. Lawler, Minneapolis; W. H. Long, Elysian, Minn.; H. E. Michelson, Bismarck.

N. D.; T. A. Peppard, Minneapolis; L. W. Pollock, Rochester, Minn.; G. W. Snyder, St. Paul; R. W. Whittier, Minneapolis, and Paul Wilson, Los Angeles, Cal.

The Tri-County Medical Society of North Dakota held a meeting last month at New Rockford, N. D. There were twelve outside physicians present, and they came in autos, and the distances traveled to reach the meeting were 47, 45, 20, 16, and 11 miles, respectively. State Secretary Rowe was present and reports a pleasant and profitable meeting. No papers were read, but clinical cases were reported and discussed at length. Meetings like this should be an incentive to counties without societies to organize, and to societies without life to have a new birth. It's worth while.

The Lutherans have practically decided to build a hospital at New Ulm.

Dr. W. S. Chapman has moved from Raymond, S. D., to Clark, S. D.

Dr. J. L. Anderson has located at Medicine Lake, Montana, taking the practice of Dr. G. H. Miller, who has moved to New York.

It is given out that there is a "good opening" for a physician at Coteau, N. D., provided he is "a stayer and thoroughly in love with his profession."

PRACTICE FOR SALE—EXCELLENT OPENING

As I wish to retire permanently from practice on account of poor health. My field is a large one for both medical and surgical work, in a Minnesota city of 12,000. Will sell my residence and practice at a very reasonable price. This is an excellent opening. Address G. S., care of this office.

PRACTICE FOR SALE

A practice in a good town, situated on a beautiful lake (a fine summer resort) in a rich farming country, near the Twin Cities. Buy my lake home cheap, and I will move out as soon as I have introduced you. Address A. M., care of this office.

PHYSICIAN AND SURGEON WANTED

A physician and surgeon, German or Scandinavian preferred, is wanted. When answering state where graduated and length of time in practice and at what place. Address Joseph E. Fitzgibbons, Box 156, Braddock, N. D.

APPARATUS AND OFFICE FIXTURES FOR SALE

On account of dissolution of office partnership we have for sale one 16-in. Western X-Ray Coil, tubes, tube-shield, stands, fluoroscope, high-frequency resonator—in fact everything complete for x-ray work and

high-frequency treatment. Cost, over \$550.00; for sale for \$275.00. One Bausch & Lomb microscope with movable stage, as good as new. Cost, \$90.00; for sale for \$55.00. One Nelson vibrator, flexible shaft and fittings, wall bracket, etc. Cost, over \$45.00; for sale for \$25.00. Water centrifuge, Thoma blood-count apparatus; office furniture, etc. We guarantee everything in good working order; can be seen at our office; Drs. Leland & Murphy, 1525 E. Franklin Ave., Minneapolis.

PHYSICIAN WANTED

We have a good opening for a physician in town of 400 with a large territory. Do not pass this up before writing the Red Cross Drug Store, Larkin, N. D.

PRACTICE FOR SALE

An unopposed village and country practice in eastern North Dakota, is offered for sale at a nominal price; has averaged \$2,500 a year for the past five years. Large territory; collections first-class. Scandinavian preferred. Address A. F., care of this office.

FOR SALE

Cadillac coupe automobile, in perfect condition, new tires and new paint; an ideal car for a physician. Will be sold at a bargain. Address M. S., care of this office.

OFFICES FOR RENT

Physician's offices for rent after Dec. 1st, very desirable, steam-heated, and modern. Good location, Cor. of Franklin and Bloomington Aves., Minneapolis. Address Dr. F. E. Bissell, 2620 W. 44th St., or call T. S. Harriet 149.

TWO INTERNES WANTED

Two male internes are wanted for a general hospital in Minneapolis. Rotation of service for one year. Address J. M., care of this office.

POSITION WANTED

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Doctor: If you want practical post-graduate work during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797, Post-graduate Medical Dept., Tulane University of La.

REPORTED FROM 82 CITIES HAVING A POPULATION OF 1,000 OR UPWARDS

CITIES.	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polomyelitis	Typhoid Fever	Jarriheal Dis- eases of Children	Cancer	Fueral Septicemia
Ada	1,253	1,432	2			1										
Albert Lea	4,500	6,192	6	1	1											
Alexandria	2,681	3,001	4		1											
Anoka	3,769	3,972	2													
Austin	5,474	6,960	5					1								
Barnesville	1,326	1,353	1	1												
Bemidji	2,183	5,099	9	2										1	1	
Benson	1,525	1,677	0													
Blue Earth	2,900	2,319	2													
Brainerd	7,524	8,526	8										1	2		1
Breckenridge	1,282	1,840	2										1			
Canby	1,100	1,528	0													
Cannon Falls	1,239	1,385	1													
Chaska	2,165	2,050	3													1
Chatfield	1,426	1,226	1													
Cloquet	3,074	7,031	3													1
Crookston	5,359	7,559	5			1							1			
Detroit	2,060	2,807	1											1		
Duluth	52,968	78,466	74	6		2	1						3	15	4	1
East Grand Forks	2,077	2,533	*													
Ely	3,572	3,572	1													
Eveleth	2,752	7,036	4											3		
Faribault	7,868	9,001	7										1	1	1	
Fairmont	3,440	2,958	3													
Fergus Falls	6,072	6,887	5										1			
Glencoe	1,788	1,788	1												1	
Granite Falls	1,454	1,454	1													
Hastings	3,811	3,983	9			1								2		
Hutchinson	2,495	2,368	4												1	
International Falls		1,487	*													
Jordan	1,270	1,151	0													
Lake City	3,142	3,142	1	1												
Le Sueur	1,937	1,755	3												1	
Litchfield	2,280	2,333	0													
Little Falls	5,774	6,078	4			1									1	
Luverne	2,223	2,540	4			2										
Madison	1,336	1,811	4													
Mankato	10,559	10,365	11	1		2									1	
Marshall	2,088	2,152	2													
Melrose	2,591	2,591	0													
Minneapolis	202,718	301,408	225	39	2	7	5	1			1		2	15	15	1
Montgomery	979	1,267	4	1												
Montevideo	2,146	3,056	3											1		
Moorhead	3,730	4,840	4										1	1	1	
Morris	1,934	1,685	3													
New Prague	1,228	1,554	2								1				1	
New Ulm	5,403	5,648	12		1	1									2	
Northfield	3,210	3,215	3											1		
Ortonville	1,247	1,774	0													
Owatonna	5,561	5,658	8											3	1	
Pipestone	2,536	2,475	1													
Red Lake Falls	1,666	1,666	2			1										
Red Wing	7,525	9,048	15	2												
Redwood Falls	1,661	1,666	2													
Renville	1,075	1,182	1											1		
Rochester	6,843	7,844	21	1	1			1							8	
Rushford	1,100	1,011	0													
St. Charles	1,304	1,159	1													
St. Cloud	8,663	10,600	5												1	
St. James	2,102	2,102	1													
St. Paul	163,632	214,744	165	10	3	7	4	3			1	2		18	10	1
St. Peter	4,302	4,176	3											1		
Sauk Centre	2,154	2,154	3												1	
Shakopee	2,046	2,302	0													
Sleepy Eye	2,046	2,247	3	1										1		
South St. Paul	2,322	4,510	2													
Staples	1,504	2,558	0													
Stillwater	12,318	10,198	5													
Thief River Falls	1,819	3,174	0													
Tower	1,111	1,111	1											1		
Tracy	1,911	1,826	1													
Two Harbors	3,278	4,990	2													
Virginia	2,962	10,473	8			1										
Wabasha	2,622	2,622	*												2	
Warren	1,276	1,613	2													
Waseca	3,103	3,054	3										1			
Waterville	1,260	1,273	1													
West St. Paul	1,830	2,660	0													
Willmar	3,409	4,135	1													
Winona	19,714	18,583	17	3										1	1	
Winthrop	813	1,043	1													1
Worthington	2,386	2,385	0													

REPORTED FROM 54 VILLAGES HAVING A POPULATION OF 1,000 OR UPWARDS

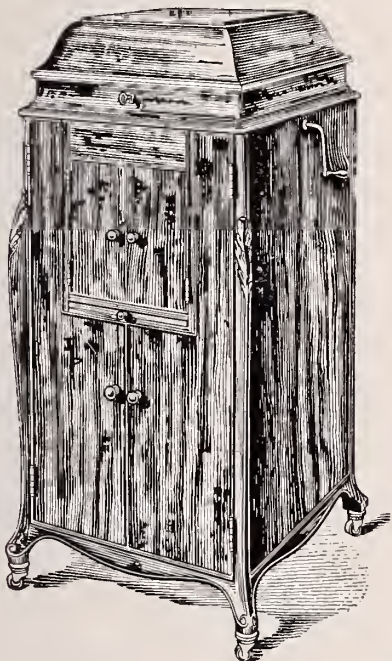
VILLAGES	Population U. S. Census of 1900	Population U. S. Census of 1910	Total Deaths	Tuberculosis of Lungs	Other Forms of Tuberculosis	Pneumonia	Diphtheria	Scarlet Fever	Measles	Small Pox	Whooping Cough	Acute Anterior Polyomyelitis	Typhoid Fever	Gastrointestinal Diseases of Children	Cancer	Puerperal Septicemia
Adrian	1,258	1,112	0													
Aitkin	1,719	1,638	1													
Akeley			2													
Appleton	1,184	1,221	0													
Belle Plaine	1,121	1,204	1													
Biwabik		1,690	1													
Bovey		1,377	0													
Browns Valley	721	1,058	3													
Buffalo	1,040	1,227	1													
Caledonia	1,175	1,372	2	1												
Cass Lake	546	2,011	3													
Chisholm		7,684	6											1		
Coleraine		1,613	1											2		
Dawson	962	1,318	0													
Delano	967	1,031	0													
Farmington	733	1,024	1													
Fosston	864	1,055	0													
Frazee	1,000	1,645	2			1										
Glenwood	1,116	2,161	1													
Grand Rapids	1,428	2,239	3													
Hibbing	2,481	8,832	12			2							1	3		1
Jackson	1,756	1,907	0													
Janesville	1,254	1,173	1											1		
Kenyon	1,202	1,237	4	1											1	
Lake Crystal	1,215	1,038	2	1												
Long Prairie	1,335	1,250	1													
Madelia	1,272	1,273	0	1												
Milaca	1,204	1,102	0													
Mountain Lake	959	1,081	1											1		
Nashwauk		2,080	0													
North Mankato	939	1,279	1													
North St. Paul	1,110	1,404	1	1												
Osakis	917	1,013	1												3	
Park Rapids	1,313	1,850	2											2		
Pelican Rapids	1,033	1,019	0													
Perham	1,182	1,376	0													
Pine City	993	1,258	2				1									
Plainview	1,033	1,175	3												1	
Preston	1,278	1,193	0													
Princeton	1,319	1,555	2								1					
St. Louis Park	1,325	1,743	1													
Sandstone	1,189	1,818	0													
Sauk Rapids	1,391	1,745	1													
South Stillwater	1,422	1,343	1													
Springfield	1,511	1,442	3													
Spring Valley	1,770	1,817	0													
Wadena	1,520	1,820	1													
Wells	2,017	1,755	1	1												1
West Minneapolis	2,250	3,022	1													
Wheaton	1,132	1,300	0													
White Bear Lake	1,288	1,505	0													
Windom	1,944	1,749	3											1		1
Winnebago City	1,816	2,555	1													
Zumbrota	1,119	1,138	2	1												
STATE INSTITUTIONS																
Fergus Falls, Hospital for Insane			11	4		1							1			
Rochester, Hospital for Insane			7													
St. Peter, Hospital for Insane			5	1												1
Anoka, Asylum			1													
Hastings, Asylum			1													
Faribault, School for Deaf																
Faribault, School for Blind																
Faribault, School for Feeble Minded			7	1	1	1										
Owatonna, School for Dependents			1													
Stillwater, State Prison																
St. Cloud, State Reformatory																
Red Wing, State Training School																
Minneapolis, Soldiers' Home			4													
OTHER PARTS OF STATE			646	35	4	27	10	1	1	....	2	5	7	92	54	5
Total for state			1484	117	15	58	21	7	1	....	6	7	22	175	119	10

*No report received. Registrar not doing his duty.

177 stillbirths and premature births not included in above totals.

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PUBLISHER'S DEPARTMENT

PREVENTION OF NEPHRITIS

In scarlet fever, diphtheria, typhoid and other infectious diseases, it is a commonplace practice to watch the urine and to take every precaution against nephritis. The discovery of the peculiar property of the chemical combination, $C^6H^{12}N^4$, to give off formaldehyde and other obscure but effective anti-septic agents, at body temperature only, was one of the most epoch-making in the history of therapeutics. Cystogen, a refined preparation of the aforementioned chemical, has been extensively prescribed for more than fifteen years and has been preferred to other products by many physicians on account of its uniformity of action and non-irritating property. More recently, Cystogen-Lithia (cystogen, 3 grs. and lithium tartrate, 3 grs.) in the form of an effervescent tablet has been given preference; one of these tablets dissolved in a glass of water, makes at once a proper dose and menstruum, to be taken at meal times or between meals, as the prescriber may direct.

POST-GRADUATE WORK

One of the gratifying and significant facts revealed by our department of News Items is the number of physicians who are doing post-graduate work, at home or abroad and for special periods, a month or a year. A year or so ago we made an effort to ascertain where those seeking such work mostly go. Of those who go abroad, practically all spend a part or the whole of their time in Vienna. Of the Northwestern men who study in the United States, more go to the Chicago Polyclinic than to any two or three other clinics combined, and this is largely due to the fact that their needs are met at the Polyclinic by many special courses, by an abundance of clinical material, and by the high-class instructors, and, in no small degree, to the fact that Dr. Harris has responded so generously to calls upon him to give addresses to medical meetings in the Northwest.

We hope that our readers will not overlook the announcements made in our columns by the Polyclinic, from time to time.

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The Journal-Lancet has always felt a special pride in the high character of the business men who use our advertising columns. No doubt the character of our advertisers is determined by the character of our readers; and as the latter demand and buy only first-class products, only such products can be profitably offered through our columns.

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We are confident that the prosperity of the Lancet is due, in no small measure, to the fact that our advertisers and our readers have maintained pleasant, helpful, and profitable relations.

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The value of zinc chloride is known to every physician, but probably few realize the excellence of the form of its combination in Lavoris, which is in no sense a secret preparation, nor is it one for which extravagant claims are made.

The Company calls attention, on another page, to its value in burns, and especially to its superiority to oils and salves.

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The institution at Kramer, Ind., known as Mudlavia, i. e., mud bath, has not reached its present proportions and gained its great popularity because it has curative mud baths especially valuable in rheumatism. It has succeeded because all who go there find the treatment, the rest, and the care given them so helpful and so delightful that they go again and again, and induce their friends and acquaintances to go also. This is the basis of success in all institutional work, and success gained in this way is permanent, bringing profit to the institution itself and lasting benefit to humanity.

HOME FROM EUROPE WITH BARGAINS

Mr. Betz, of the Frank S. Betz Co., of Hammond, Ind., is home from his annual trip to Europe, and he says he brought many new and good things for physicians at astonishingly low prices. For instance, he says that once upon a time he reduced the price of X-ray tubes from \$35 to \$11, and now he can do better than that. He brought back a tube in which the vacuum is controlled direct from the lamp-socket of either the direct or alternating current. Of course, the Company wants our readers to know all about these good things and especially about the prices, and a note or even a card of inquiry will obtain the information. Address the Frank S. Betz Company, Hammond, Ind.

ANTIDIPHThERIC SERUM AND GLOBULINS

In their current announcements to the medical profession it is noted that Parke, Davis & Co. give equal prominence to their antidiphtheric serum, which they have produced unchanged for many

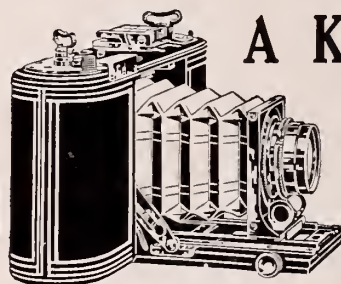
years, and the newer "globulins," which they have been marketing for a number of seasons.

The globulins, as is perhaps known to most practitioners, is antidiphtheric serum with the non-essential portions eliminated. Compared with the normal serum it provides a corresponding number of antitoxic units in lesser bulk, permitting in consequence a smaller dose, which probably accounts for its apparent growth in favor among physicians.

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THE JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION AND THE NORTHWESTERN LANCET

ESTABLISHED 1870.

PUBLISHED TWICE A MONTH

VOL. XXXI

MINNEAPOLIS, DECEMBER 15, 1911

No. 24

NOTES ON PANCREATIC DISEASE*

By R. E. WEIBLE, M. D.

FARGO, N. D.

A few years ago surgeons believed that nearly all of their abdominal work lay below the belt line. Above that line was a territory into which few ventured or accomplished much. An occasional operator attacked the rare large pancreatic cyst, gastric fistulas were made, a traumatic injury might be sutured, or a malignancy examined. Gall-stones were occasionally diagnosed and removed; much more often they were treated medically. This was the time when olive oil was king. However, the care of the upper abdomen was principally in the hands of the internist, and the average case remained a patient for many years.

To emphasize this idea I will quote from an edition of an authoritative surgical work gotten out as late as 1900: "The treatment of biliary calculi belongs, at the outset, in the province of internal medicine. . . . The surgical . . . treatment of cholelithiasis is indicated only when serious disturbances exist which do not yield to internal treatment. It is especially necessary when there is continued retention of bile, or very severe pain, or increasing marasmus with severe jaundice, or, finally, when threatening symptoms appear in consequence of perforation of the bile passage or intestine," etc. The same authority says, regarding the pancreas: "Inflammations of the pancreas are rare," and, again, "Complete extirpation of the pancreas is to be avoided as far as possible."

The gall-bladder and the stomach eventually attracted the notice they deserved, and finally,

thanks to such men as Fitz, Mayo-Robson, and others of their standing, the pancreas is yielding up its secrets, though undoubtedly much is yet to be learned. So, while we are not diagnosing all these various lesions, still we are helping many chronic dyspeptics, who a few years ago spent their lives in a futile pursuit of medicines that might prove more effective than dyspepsia tablets or stomach bitters.

The diagnosis of gall-bladder disease is getting easier, but, in the words of Deaver, "in the domain of the pancreas there still remains much unbroken ground." Ochsner says: "If, in cases in which we can exclude a diagnosis of duodenal ulcer, we add to the well-known symptoms of cholecystitis an area of tenderness from five to ten cm. long, located to the right of the umbilicus and over the middle of the right rectus muscle, we have the typical symptoms from which to make a diagnosis of pancreatitis." This sounds easy. Moreover, Mayo-Robson in his work tells us that when, from the history of the case, he is suspicious of pancreatic disease the Cammidge reaction will nearly always prove the correctness of the diagnosis, or rather it is so accurate that it will practically make the diagnosis. Deaver, in 351 applications of the Cammidge reaction, is unable to get the same results. In over half of his cases the test was of no benefit whatever in arriving at a diagnosis, and in a grave consideration of the symptoms of this disease he cites many symptoms which may be present, such as vomiting, characteristic stools, pain, rigidity, fever, loss of weight, jaundice, palpability of the

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

swollen organ, etc. The number of these symptoms in a given case varies so much that he does not attempt to arrive at a typical picture of the disease as does Ochsner. The different outlook presented by these men is a fair excuse for the average man's often making his diagnosis at the operating-table.

For the purpose of arousing discussion I will recite some recent cases that suggest pancreatic pathology:

Case history.—Mrs. J. S., aged 61, German. About twelve years ago she had an attack of what she called acute stomach trouble. There was pain in the region of the stomach and along the lower ribs on the right side. Any food caused great increase in pain. She was in this condition for about two weeks. No more attacks were experienced until near the present time, but a chronic condition was maintained. This was evidenced by soreness in the right epigastrium, moderate ache in the right shoulder, and indigestion at times. Often when starting a meal with a good appetite she would eat a few mouthfuls, feel very full, and would have to stop. She remembers two or three short spells of diarrhea, but no history of copious, light-colored, offensive stools could be found. About February 20, 1911, she was taken with a severe pain in the right epigastrium. It extended into the back, near the right of the middle line, also into the right shoulder and arm. A day or two later jaundice appeared, lasting three or four days. There were two spells of vomiting that lasted two or three days. Any food whatever caused severe distress. This condition persisted up to the time of the operation.

Examination showed an abdomen with little subcutaneous fat. There was some tenderness on pressure in the epigastrium, but much more near the gall-bladder. Near the left edge of the stomach a small induration could be felt. This, together with a long history, made one think of a possible malignant trouble, although the location of the induration and the severity of the attack spoke against such a diagnosis. It was in about the right location for the tail of the pancreas.

Operation was at St. John's Hospital April 6, 1911. A high right rectus incision was made and the gall-bladder and ducts palpated. About fifty small stones were found in the gall-bladder and were removed, and the gall-bladder drained. A small but very rough stone in the cystic duct was removed by incision, and a drain was put to this point also. Nothing of note was found in the stomach, but the pancreas was much

thickened throughout. Undoubtedly it was the tail of the pancreas which was felt on examination. Tenderness on pressure and gas in the stomach and duodenum probably prevented recognition of the increased size in the head. Convalescence was uneventful, except that the drainage of bile was fitful and not always as free as could be desired. She has remained well. This is probably an ordinary case of chronic pancreatitis following gall-bladder disease.

The following cases are somewhat different:

Case history.—Mrs. H. M. L., aged 71, Scandinavian. Over twenty years ago she had a week's illness with much pain in the epigastric region and lower chest, also in the region of the right scapula. From that time she had attacks two or three times a year. About fifteen years ago she began to have attacks of asthma; these also have persisted. Twelve years ago typical gall-bladder colic began and would recur about once a month. Her asthma was apt to be especially bad at these times, for about a week. Six years ago she found that a walk of a block would get her out of breath. Four years ago a physician told her she had diabetes and prescribed an antidiabetic diet. Three years previous another physician diagnosed diabetes and appendicitis, and prescribed antidiabetic diet. He told her that her heart was weak and for that reason he would not dare to operate. The past three years she has been continually ill, and the pain in her right scapular region has been more or less constant. She has been under medical care most of the time during her illness and has tried various climates for her health. In July, 1910, pains over the upper abdomen and lower part of the chest became constant, and the asthma seldom quieted. This condition remained the same until I saw her last July.

Examination showed a 70-year-old woman, fleshy, suffering much pain and asthmatic dyspepsia. The urine was heavy and contained a trace of albumin and gave characteristic sugar reaction. No heart-lesion could be found, though the legs were somewhat edematous. She was not jaundiced. There was tenderness in the region of the gall-bladder. A diagnosis of impacted duct-stone was made and antidiabetic diet and laxatives prescribed. Frequent urinalysis during the next three months always showed sugar. Persistent pain finally forced the patient to demand operation and, after warning the family of the danger, she was sent to the hospital.

Operation was at St. John's Hospital, November 9, 1910. The liver was much enlarged, the

usual sharp lower edge was very round and thick, and the normal liver color was changed to a somewhat mottled gray. I believed this to be due to inflammatory and passive congestion changes. The pancreas was thickened. A rough stone the size of a hazel-nut was removed from the cystic duct and the duct drained. The stone was deeply imbedded and came away with some difficulty. Fifty moderate sized stones were removed from the gall-bladder and a drain inserted.

Present condition.—Most of the time she is free from all pain and, although there is moderate edema of the legs, she feels fairly comfortable. Asthma bothers her at times, but not as much as formerly. Twice since leaving the hospital there has been moderate pain for four or five days and swelling in the gall-bladder region, and at these times I have thought that I could feel an indistinct swelling in the region of the pancreas. However, this is probably only muscular rigidity, as then the epigastrium is tender. I think she would have done much better if the gall-bladder had been drained for a longer period.

Convalescence was somewhat slow, but was steady. Bile drained freely and there was no more pain. She left the hospital December 12, 1910, for her home near by feeling comfortable and with the wound healing nicely. Urinalysis on November 12, 16, 25, 28, and 29, and December 1 and 6, and occasionally thereafter showed no sugar. Six months later she died from obstruction of the common duct. This case was operated upon too late. Permanent changes had occurred in the liver, bile ducts and pancreas. It is interesting, however, to note the improvement in the asthma and the absence of the sugar. An earlier operation would undoubtedly have given permanent relief.

Case history.—Mr. J. C., aged 30, German. Nine years ago, because of distress, gas, and occasional vomiting, his physician diagnosed appendicitis and removed the appendix. The patient states that for a time there was some improvement in the abdominal distress but that his vomiting soon became more regular than ever. This would come on immediately after each meal. Three years ago a Minneapolis surgeon explored the gall-bladder, finding it healthy. He made a second incision in the middle line and reported to the patient that he had removed a pancreatic cyst. The patient stated that again there was some improvement. He did not vomit until a day or two before leaving the hospital. The im-

provement was only temporary, however, and he was soon as bad as ever. He has never been jaundiced.

Examination showed a slender man with the scars of three incisions. He was moderately tender over the stomach, which was somewhat distended. Nothing could be felt.

Operation November 19, 1910, St. John's Hospital. An incision in mid-line over the stomach was made. The gall-bladder was normal, but the pancreas was much enlarged and hard throughout. It felt as though it was made up of many fair-sized nodular bodies, giving one much the same impression as in feeling the polycystic kidney. The head of the pancreas was especially enlarged and seemed capable of permitting pressure on the pyloric end of the stomach. The opening of the pylorus seemed contracted, although no scar or ulcer could be found. It was difficult to express any gas from the stomach into the duodenum. A posterior gastro-enterostomy by the suture method alone was done. Convalescence was uneventful. He has never vomited since and at present writing has gained thirty pounds in weight.

The above cases differ materially. The pancreas was palpated in the first, and this was not the one of greatest enlargement, yet it was a favorable case for diagnosis. The second case would suggest pancreatic involvement, both from the old history of gall-stones and the presence of sugar in the urine for at least four years. The third case, with by far the greatest enlargement of the pancreas, did not suggest the involvement of this organ either from the history, symptoms, or examination. Characteristic stools were absent in all.

In all cases of chronic gall-bladder disease of long standing, especially if there is also evidence of the presence of gall-stones, the possibility of chronic pancreatitis should not be forgotten. The perfection and simplification of some test that would replace the complicated Cammidge reaction and other less-known tests would here aid us greatly.

There is no doubt in my mind that one can sometimes make a probable diagnosis of pancreatic disease from the history. In thin subjects with the upper abdomen free from gas, it is sometimes possible to feel and recognize the enlarged organ. Taken together these two things make a diagnosis fairly certain; but in the average cases the certainty of Robson and the optimism of Oschner seem a long way from me yet.

FOR DISCUSSION, SEE PAGE 595

THE PHYSIOLOGY AND PATHOLOGY OF THE GALL-BLADDER IN RELATION TO ITS REMOVAL*

BY H. P. RITCHIE, M. D.

ST. PAUL

Our literature is full of the problems of gall-bladder surgery presented in various ways by the masters of the profession. It seems hardly possible to add to this great volume except by reporting one's own clinical experience and the deductions made therefrom, hoping that they may be of some value for your future guidance.

The diagnosis of gall-bladder disease is often difficult, but, whenever correct, the operation of cholecystotomy, the removal of gall-stones, and the establishment of drainage have reached such a stage of perfection in technic that a fatal result is a rare event. Not so many years ago, it was found that the mere removal of gall-stones was insufficient, often resulting in the continuance of the symptoms, mucous fistula and a tedious convalescence. Extirpation was performed in selected cases with a resulting cure. The gall-bladder was thus proven to be only an accessory organ, unessential to life or health, or to the proper performance of the digestive functions. Its surgical removal was much more of an operation and the mortality was higher, due to the greater severity of the disease, necessitating longer anesthesia, more traumatism, and a broader latitude for operative accidents. Yet time and experience have decreased this mortality to a point where we are warranted in excising the organ, if we can demonstrate changes which justify us in subjecting our patients to the added risk. The technic of this operation has been developed to such a point that it is done in practically the same way all over the country, and I have nothing to add to the subject in this paper.

The fact that the gall-bladder is not essential and can be removed with ever-decreasing risk has led some surgeons, according to their writings, to accept the operation as a routine or, at least, as a matter of preference. There are also those so radical as to believe that the gall-bladder is functionless, a remnant of evolution, therefore, that once diseased it should always be excised. On the other hand, conservation is so instilled in many surgeons that they leave markedly diseased organs, feeling that drainage will eventually cure them. I have always believed that

with a knowledge of the physiology and pathology a correct decision can be made in each case, and that that knowledge should be the basis of



Fig. 1. The cystic gall-bladder in which the changes in the mucous membrane both from over-distention and pressure of stone render the gall-bladder functionless in the production of normal mucus.

decision rather than a preconceived idea of its lack of function, or faith in nature's reparative process. Some time ago Dr. MacLaren and I

*Read at the 24th annual meeting of the North Dakota State Medical Association, Fargo, May 9 and 10, 1911.

wrote, conjointly, a paper upon the removal of the gall-bladder, in which my senior expressed some of the principles herein stated. Since that publication, experience has somewhat better arranged them as a working basis.

We must acknowledge at the outset the physiological duty of this organ, for, unless we do, we shall do the injustice to our patients of leaving a gall-bladder which has been once diseased, thus joining the ranks of radical surgeons. Has the gall-bladder a function? Our old text-books of physiology tell us that it is a storehouse, which, when the acid chyme of the stomach reaches the ampulla, is stimulated to contraction, and expels

called cystic conditions, to a most extraordinary capacity for distention and it is in this fact that we find one of its functions and one reason for its presence. The liver secretes bile, and its production is fairly constant. Bile, being thus secreted, must flow onward from the collecting ducts of the liver into the hepatic and common ducts of the biliary system. Its flow then depends upon production and if this is fairly constant the onward flow will be kept up. It is probable that the biliary system, excluding the gall-bladder, is far more capable of taking care of the bile than the gall-bladder itself. But if an obstruction to the onward flow occurs, then the bile must be taken care of in the system; and if the obstruction continues the ducts will become engorged. It is probable that an obstruction occurs quite frequently, as it is not inconceivable that the opening into the duodenum is often plugged by food-masses; and the repeated occurrence would result in a distention of the common duct and the hepatic and collecting ducts of the liver, which would interfere with secretion. When such an obstruction does occur, the gall-bladder with its distensibility is ready to admit the bile, thus relieving the pressure, and likewise ready to collapse and empty its contents whenever the blockade is raised. Thus it would seem that the liver and the pancreas are protected from damage, and that the gall-bladder acts mechanically to relieve the ebb and flow of intraductile pressure.

The lining of the gall-bladder is a mucous membrane, and its function is the production of mucus. Flexner and Opie in their other great works have proven that bile, mucus-free, is an irritant to the pancreas, thus pointing out a very important function of the gall-bladder, one which should be conserved, if the changes resulting in disease have not advanced so far as to make recovery impossible.

The functions of the gall-bladder may, then, be stated as, first, distensibility to take care of intraductile pressure, and, second, the secretion of mucus.

I do not know that the above statements have been proven, irrefutably, as facts, but they seem reasonable, at least, as theories and they form a working basis for the surgical problem of cholecystectomy.

The study of the pathology of the gall-bladder interests us as surgeons only as the disease-changes may affect the proper performance of these functions. What are these changes? It is

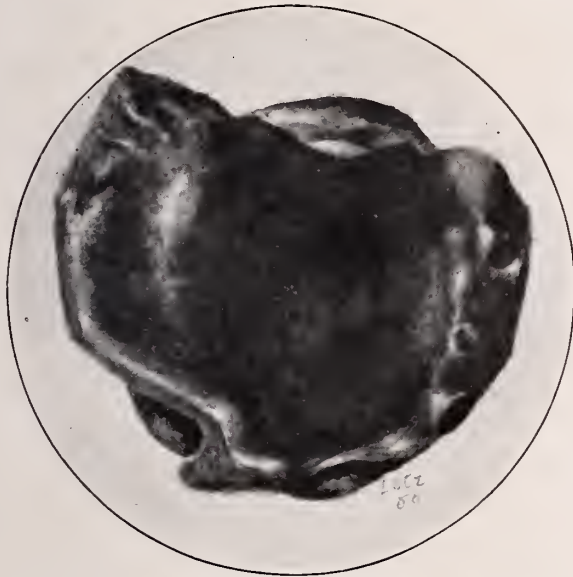


Fig. 2. The gall-bladder, with great interstitial growth so thickening the walls that the function of distensibility is wanting.

its contents along the common duct into the intestine, thus neutralizing and rendering alkaline the food-mass, in order that the pancreatic ferments may perform their several functions. The surgery of gall-stones with the usual drainage has proven that the twenty-four hours' output of bile is, in quantity, so far above the capacity of the gall-bladder that a very small part of the total can ever reach and enter it. This disparity in the quantity of secretions and the capacity of the organ has proven that the above-given function is in a great degree incorrect. While we admit the structure of the walls contains muscle-fiber both longitudinal and circular, those of us who have seen the flaccid wall of a normal organ can hardly believe it has much power of contraction, therefore this function also is questioned.

Our attention is constantly called, in the so-

our experience, and a theory generally accepted, that gall-stones are secondary to infection of the biliary system.

It is not within the province of this paper to discuss the avenues of infection further than to say that the clinical experience in gall-bladder cases of finding past-inflammatory processes elsewhere in the abdomen is so frequent that I believe a physician will do well to prove recent, latent, or remote original areas of infection either



Fig. 3. The gall-bladder, with ulcerative changes in the mucous membrane. The removal of the stones simply results in contraction and the formation of stricture.

appendiceal, pelvic, hemorrhagic, or what not before making a positive diagnosis of cholecystitis. Areas of dead bacteria have been demonstrated in the liver and it is a generally accepted fact that the portal system is a frequent source of infection of the duct system. Ascending infection from the duodenum certainly has its place and a great many of the acute infections find their explanation in this fact. If this latter source is accepted it is only reasonable to believe that the inflammation of the common duct will produce some obstruction to the flow of bile and a pressure which must be taken care of by the

distensibility of the gall-bladder. The question then arises, does this not occur often, thus relieving very mild forms of infection. In fact the milder forms of infection seem to be cared for, without giving clinical symptoms, as often there are no signs of gall-bladder trouble in any way until the presence and actions of gall-stones call attention to this area. We find that the original infection is cared for and practically cured in a great majority of instances, leaving behind, as a result, deposits of salts and pigments formed in nature's reparative processes.

In our experience the original inflammatory process has disappeared leaving only some whitened scars on the peritoneum, some thickening of the submucous structures, or some milder changes in the mucous membrane. But the distensibility is present and the gall-stones are the only menace to complete function of the gall-bladder. Most of the irreparable changes of the gall-bladder are due to the gall-stones and their presence. This fact is most important and we should urge our patients with gall-stones to submit to their removal at the earliest possible moment because of the possibility of their presence producing irreparable changes in that organ. How have the infection and its consequent inflammation been cured? It has burned itself out to some degree, but drainage has played the greatest part and often we only need to make that drainage more complete to effect a permanent cure.

What is most important to decide upon in viewing a gall-bladder is its distensibility and compressibility. Of what use would it be to have a gall-bladder incapable, even though the ducts were patulous? The two changes affecting this function are, first, growth of the submucosa, and, second, peritonitis producing distortion of the organ. Often the growth in the submucosa is of such a degree that the walls are stiff and will not collapse. Such a condition is a positive indication for removal because drainage can have little effect in repairing such growth. This condition usually results from successive attacks of inflammation. Peritonitis and resulting adhesions to adjacent structures may produce all sorts of distortion, and when occurring with thickening of the submucosa may form pockets in which bile will stagnate. Such processes tend to produce the contracted gall-bladder which must be removed, according to our present acceptance of its physiology.

Changes in the mucous membrane which will

interfere with the normal production of mucus render the gall-bladder useless and even a menace, for by the formation and passage of ropy mucus temporary obstruction often occurs, leading to future trouble. In the great majority of cases these changes are due to the irritation and ulceration of gall-stones. These ulcerations may go on to perforation. It is, manifestly, poor surgery to leave a gall-bladder in which the mucous membrane is thus destroyed, even though the area may be comparatively small, especially since it is common knowledge that mucous membrane once destroyed is not regained, but results in



Fig. 4. The small contracted gall-bladder, which should be removed because of nondistensibility and irreparable mucous-membrane changes.

scar-tissue, thus forming a point for future deposits of salts and cholesterin.

Any obstruction to the outward and inward flow of bile due to gall-stones, strictures, or distortions, decides for extirpation, as such an occurrence renders both so-called functions of the gall-bladder insufficient.

Obstruction of the cystic duct frequently occurs in gall-stone disease, and is probably the most frequent cause of biliary colics by over-distending the gall-bladder. Whenever the gall-stones find a permanent lodgment the more common cystic gall-bladder results. This should always be removed on two counts, first, because of the possible stricture of the cystic duct, and, second, because the mucous membrane is thinned

out from over-distention, and it is hardly to be expected that it can regain its normal function.

At the last review of our cases, I found 21 cholecystectomies in 165 gall-bladder operations. Since that time in 46 cases the organ was excised 16 times. This large difference in percentage is, to some degree, explained by the fact that a great many gall-bladders were left in place during the early years of our surgical work which today would be promptly excised. The fact that these severely diseased gall-bladders were left and the patients secured their health and were relieved of their symptoms proves that drainage will do wonders. But in the light of our present knowledge, the question arises, how many of these organs are functioning? Instead of bringing to your notice case reports or dry statistics, I thought it would be more interesting to present some selected case photos and water colors showing the more or less typical conditions which necessitate removal. Viewed in the light of the two functions of the gall-bladder the reasons for their excision are evident.

Ulcerative changes in the mucous membrane, inflammatory exudate of the submucosa, peritoneal adhesions, obstruction to the cystic duct, are the accepted reasons for cholecystectomy and are well known to you all. Their demonstration must be made at the time of the operation, and made promptly. There are some cases which are perfectly evident, but the border-line condition may be more easily solved if we accept and keep in mind as a working basis the above-stated physiology.

DISCUSSION OF THE PRECEDING PAPERS

DR. R. D. CAMPBELL (Grand Forks): I wish to thank the gentlemen for presenting these very interesting papers. I would like to ask Dr. Ritchie whether he has ever had any experience in over-drainage of the gall-bladder, that is, draining very profusely for a considerable time with a very detrimental effect on the patient. I had a patient in whom I had drained the gall-bladder very profusely for ten or twelve days, and the patient became so weak that his condition seemed almost hopeless. Drainage was entirely suspended for twenty-four hours, and then he improved and made a complete recovery. I was wondering whether Dr. Ritchie had any experience with excessive drainage followed by severe prostration.

DR. L. W. MECKSTROTH (Wahpeton): I was particularly interested in Dr. Weible's diabetes case, and I would like to have some one explain on what grounds we may expect diabetes in a pancreatic case. I have understood that diabetes occurs only when there is a complete destruction of the pancreatic cells.

In Dr. Ritchie's paper he speaks of the storage

function of the gall-bladder as not being necessary. I think it is a question of how necessary it is, and how much may be reproduced by the dilatation of the vessels after the gall-bladder is removed. We know from experience that in draining the gall-bladder it usually drains more during the night than during the day. It drains more during the largest fasting period, which teaches us that there is a time when nature requires the storage of bile to be brought into use later and during the periods of digestion.

DR. H. O. ALTNOW (Mandan): I think the substitution of cholecystectomy for simple drainage of the gall-bladder is coming to be recognized as the correct procedure. A few years ago I had an opportunity to see the results in both classes of cases. Cases in which drainage of the gall-bladder had been done came back with results that were not always all that was desired. In a number of these cases it was found necessary to do a secondary operation and with much better results. In the cases where cholecystectomy was practiced the end-results were very much better, and many of these cases I was able to see five or six years after operation. In the cases that I saw, I am fully convinced, the results were very much better with cholecystectomy than with the drainage operation.

DR. W. A. DENNIS (St. Paul): These are two extremely interesting papers on subjects of great interest to the surgical world, and they deserve a thorough discussion.

So far as pancreatitis is concerned, I think the question of its presence or absence depends upon the personal equation of the surgeon. It seems to me it must be very hard to diagnose a little hardening of the pancreas, and I think we must depend largely upon the symptoms as to whether pancreatitis is present. In some cases there would be no difficulty in deciding that there is chronic pancreatitis, for the changes would be easily recognized. I think Dr. Ritchie stated the indications for cholecystectomy better than I have ever before heard them stated.

In regard to the physiology of the gall-bladder: I must say I have never been able to convince myself that it has any great physiological action. When it is remembered that the capacity of the gall-bladder is from one and one-half to two ounces while the output of bile in twenty-four hours is one and a half pints, it is difficult for us to understand how the storage capacity is of important consequence. It was shown by the study of Opie that when there is an obstruction of the common duct and the bile is forced back in the ducts of the pancreas, there is an acute pancreatitis, often necrotic; that is, when pure bile is dammed back, but when this bile is mixed with mucus, such an acute condition did not result, consequently it was thought that one of the principal functions of the gall-bladder was to supply the mucus, which, when mixed with bile, prevents acute pancreatitis in case of obstruction at the lower end of the common duct. This is important, yet it has seemed to me it has hardly been borne out in the experience that has come to me. I agree with the doctor who has just spoken that those cases which seem to have done the best have been the cases in which cholecystectomy has been done,

where they were uncertain whether it was better to remove the gall-bladder or not. I will not say that every gall-bladder under operation should be removed, but I feel safe in saying that every gall-bladder which is doubtful would better be removed. Probably you all have had the experience of occasionally having to go back and take out the gall-bladder which has been left, and my personal experience is that I have had no regrets in those cases where I have done cholecystectomy. There is a very slight added mortality in cholecystectomy, and in case of doubt it is best to remove the gall-bladder.

I want to congratulate Dr. Ritchie on the clear and concise way in which he stated the indications for cholecystectomy, but I would be just a little more radical in deciding whether removal is necessary. It would seem to me it would be a very profitable study if someone were to look up the evolution of the gall-bladder and study it from an anatomical standpoint. We might get an idea from a study of the lower animals as to what the function of the gall-bladder really is, finding out in what animals it is the largest and most pronounced. Up to the present time I have seen no such study, and so far as our present knowledge goes I think there has been a lack of such effort.

DR. WEIBLE (Essayist): Speaking of Dr. Ritchie's paper, I do not believe practically any cholecystectomies were done at one time; they were all drained. I believe the removal of the gall-bladder is a necessity. So far as this form of the subject I was speaking upon is concerned, I believe one should be very careful to know that the pancreas is involved before attempting the removal of the gall-bladder, as the treatment of pancreatic disease has been changed since the Folsom method has been given us, which is the drainage of the gall-bladder.

I was asked how I removed the stone. I believe that was a case of pancreatic diabetes. I imagine this lactosuria is due probably to the disease of the bile-tracts deranging the function of the liver and giving us lactosuria,—liver lactosuria.

DR. H. P. RITCHIE (Essayist): In answer to Dr. Campbell's question, I will say that I do not remember of any evil results from overdrainage. Our plan is to use plain dry sterilized catgut for fixing the drainage tubes, which are readily removed in a week or ten days. I believe that Dr. Weible's suggestion that the condition of the pancreas be investigated before the gall-bladder is removed is important. If a pancreatitis be present, it may be well to leave the gall-bladder for drainage of the ducts even though there may be positive evidence that the gall-bladder should be excised. It is very interesting to review the very early cases in which today the gall-bladder would be readily removed, but who still carry this organ without serious symptoms. In the light of our present knowledge we wonder how many of these gall-bladders are functioning. We have seen during the past year two interesting cases of gall-stones, both of whom showed sugar in the urine, which entirely disappeared after the removal of the stones and drainage. I think the diagnosis of pancreatic disease previous to operation, is most difficult, even with the finer laboratory tests at our command. When a tumor is present in the epigas-

trium and it should be of the pancreas, it is sometimes possible to correctly diagnose, as we have done in three cases, but when it comes to the ordinary forms of pancreatic disease we enter a speculative field. The difficulty should only stimulate our endeavors.

The relation of pancreatic disease and the several conditions of the biliary system is so close that they are often concurrent, one depending upon the other.

We do not consider ourselves as advocating cholecystectomy as the operation of choice. We believe that there must be a positive finding such as indicated in the paper before a gall-bladder should be removed.

The question is raised as to whether a gall-bladder has a function. I think it has, and if so these functions should be conserved if possible.

I wish to thank the gentlemen for their discussion.

INFECTION AND IMMUNITY*

BY H. E. FRENCH, M. D.

GRAND FORKS, N. D.

This paper was prepared and read before the Yankton District Medical Society in March. It was part of a symposium, attempting to present the more important laboratory or experimental data upon the subject, and was followed by a paper upon the more practical subject of serum therapy. It claims to be nothing more than a brief and hasty résumé of what may be found in a few well-known books and journals.

It might be interesting to think for a moment of the various theories that have been put forth at various times for the causation of disease. Savages, and barbaric peoples of perhaps every race and every age, have thought of disease as due to the visitation or the possession of an evil spirit; and their treatment has taken the form of propitiation, or of driving or enticing out the demon. Hippocrates, the father of medicine, explained it as due to a lack of the proper proportions of the humors of the body,—blood, phlegm, black bile, and yellow bile. This theory held large sway throughout the most enlightened countries, past the age of Galen, and until very recently. It still crops out now and then, as in the phrases: sanguine temperament, bilious temperament, etc. In the middle ages and later, several more or less picturesque theories sprang up, such as, "an intestine movement of particles,"—whatever that means; "an attempt of nature to eliminate morbid matter,"—an idea still found among some of the laity as an explanation for boils and eruptions; "a want of tone," "a deficiency of stimulus," phrases we still find useful now and then; and again in the words of Hahnemann, "disease is a spiritual dynamic derangement of a spiritual vital principle,"—whatever that means.

The germ theory of disease followed the germ

theory of fermentation, and rested upon the work of Louis Pasteur. We do not like to say "germ theory" any more, because the relation of germs to disease is so well established. The facts in regard to diphtheria, pneumonia, tuberculosis, cholera, typhoid, tetanus, meningitis, gonorrhea, and syphilis, are not in the least to be doubted; and the infectious nature of scarlet fever, measles, and acute articular rheumatism is fully accepted, and only less completely understood.

Infection is the invasion of a host by a pathogenic microorganism. I need not remind you that infection is a relative term, and depends upon the host quite as much as upon the invader. Cold-blooded animals are not attacked by the same organisms that affect warm-blooded animals, and *vice versa*. Carnivora are less susceptible than herbivora in general. Man has many infectious diseases peculiar to himself alone. Nor do I need to speak of predisposing causes, such as age, hunger and thirst, heat and cold, and traumatism; or of the term mixed infection, and the terms bacteremia, septicemia, pyemia, and toxemia. And interesting as are the routes of invasion, the means of transmission, and the external means of defense, I shall pass over them, and go at once to the subject of immunity.

Immunity is unusual or complete ability to resist a pathogenic organism. Immunity is also a relative term. All of the higher organisms are susceptible, under certain conditions, to parasitic invasion. Every higher organism in the same way is immune, either as an individual or on account of race or species, to many parasites that infect other organisms.

We divide immunity first of all into two types,—natural and acquired. Natural immunity at its best belongs to the species or race, and depends we say on metabolic differences. It is a

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

question of the parasite's being able to live and produce its usual results in the environment. Sometimes metabolic differences are evident, as that between cold-blooded and warm-blooded animals. At other times the difference must be hypothetical. Species or race immunity is well known, and often striking. Chickens are practically immune to tetanus: it takes 200,000 times as much toxin, gramme for gramme, to kill a chicken as to kill a horse. Jersey cows are far more susceptible to tuberculosis than Holsteins. In the various races of man, however, any difference seems to be a question of opportunity or exposure to infection, while the survivors of an exposed race develop a partial immunity that renders the ravages of certain diseases less severe than in a race to which the disease is new. Natural immunity in the individual is only very relative; one of a family may not take typhoid while others do after all have had seemingly the same opportunities for infection, but hunger, thirst, fatigue, and the presence or absence of an accompanying infection are very likely the determining factors here.

Acquired immunity develops in, and at times may be given to, the individual. Immunity of this kind is one of the natural consequences of many, perhaps all, of the acute infectious diseases, provided, of course, that the infection is not severe enough to destroy the mechanism of healing. Its duration may be brief, as in diphtheria; or permanent, as in smallpox. If the immunity develops from the self-healing mechanism of the individual himself, we call it active; if it is added to the individual after being developed in another animal, we call it passive.

The ways of bringing about active immunity are—

- a. By the incorporation into the animal body of living virulent bacteria. This method is used experimentally in the laboratory, and was involved in the old practice of variolation. The immunity that results from an attack of disease after natural exposure is practically the same.
- b. By the incorporation of living bacteria, but of diminished virulence; also well known as a laboratory method, and employed in some of the vaccines for anthrax.
- c. By the incorporation of dead bacteria. Used extensively in the efforts to secure immunity against cholera, typhoid, and plague, also in the work with opsonins.

- d. By the incorporation of bacterial products secured during the life of the germ. The preparation of diphtheritic antitoxin involves this method.
- e. By the incorporation of products arising from dead cells. Of experimental interest, and also used in the efforts to find a serum or vaccine for typhoid.
- f. By the incorporation of certain unrelated organisms. As in the use of bacillus pyocyaneus and bacillus prodigiosus against anthrax, and the use of yeast against certain pyogenic infections.

Passive immunity is secured by the injection of a serum that has been produced in another animal that is actively immune. The immunizing serum tends to neutralize toxin, or to destroy or otherwise modify the invading organism, or both. Clear lines cannot always be drawn between the two methods, nor between the two types of immunity.

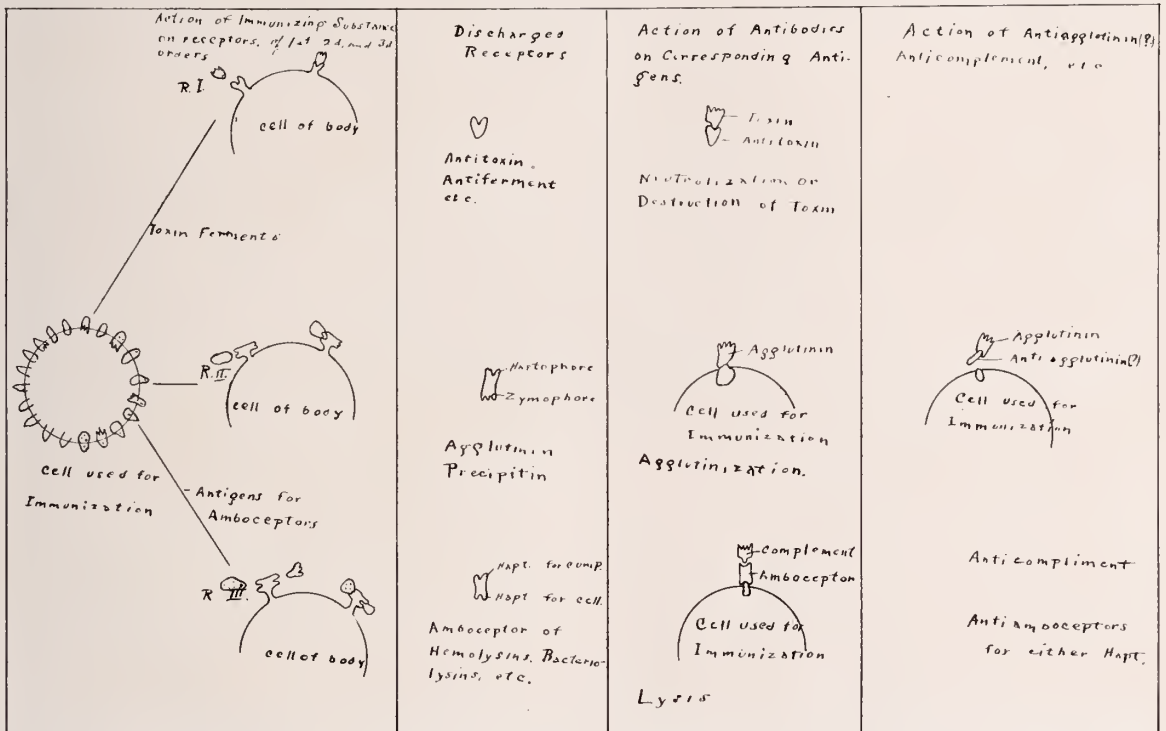
The big terms that need further discussion are antitoxins and other antibodies, phagocytosis and opsonins, and anaphylaxis.

Antitoxins and other antibodies.—One of the means of defense that nature often establishes in the body of an animal is the presence of antitoxin and other antibodies. Invasion by a foreign body is followed by a conflict—the invading substance tending to destroy certain cells or certain processes of the host, the antibodies tending to neutralize or destroy the invader. What we call toxins, bacteria, and many other substances have the power when injected into the body of a susceptible animal not only to produce disease and to kill when given in the right amount, but also to stimulate the production of specific antibodies in the body of the host when given in smaller amounts, or when the disease is not so severe as to kill. Against toxins of the various kinds,—diphtheritic, tetanic, meningococcic,—and against hemolysins, venoms, and certain vegetable toxins we have specific antitoxins. Against sera, milk, white of egg, bacteria, blood cells, spermatozoa, liver cells, kidney cells, etc., we have a variety of specific antibodies—agglutins, precipitins, and lysins.

To illustrate: We know without doubt that the diphtheria bacillus produces a toxin. The toxin is produced by the metabolism of the germ, and it may develop in the body of an infected animal or in a culture in a test-tube. In sufficient amounts and under favorable conditions the toxin will kill a susceptible animal, no matter

where it has been produced. But if the toxin can be given in smaller doses, varying with the animal and the attending conditions, not only does the animal not die, but it becomes capable of resisting very large doses of the toxin. The animal has become actively immune. Its serum contains a large amount of a specific antitoxin, and is capable of neutralizing the toxin of diphtheria, not only in its own body, but also in the test-tube, so that toxin treated with antitoxic serum will no longer kill. Antitoxic serum will also neutralize toxin in the body of another animal, suffering from infection or from an injection of toxin, if given at the proper time and

Antitoxin is not very stable: it deteriorates in air and is destroyed by heat. Not only is the same thing true for the other antibodies, but heating to 55° or 60° C. destroys the power of a lytic serum, while the addition of a very little serum from a normal animal, it need not be an immune one, restores its power. The less stable part of a lytic serum—the part rapidly deteriorating, or destroyed by low heat—is known to be the active or toxic part, is widely distributed in sera, and is called *alexin*, or complement; the more stable part—the specific part, that develops in large amounts in an immune animal—acts to unite the cytotoxin, or complement, to the invad-



Taken, with slight changes, from Richett's "Infection, Immunity and Serum Therapy," in turn modified from "Ehrlich's Sertenkittentheorie" by Ludvig Aschoff.

in the right amounts. The latter animal is said to be passively immune.

Again, bacteria, milk, egg albumen, and tissue cells of another animal are more or less harmful when injected into an animal. Not only is this true, but the serum of the injected animal is more or less destructive to any such invading substance. It contains various agglutinating, precipitating, and lytic substances, and by repeated careful injections it can be made to contain large amounts of any or all of them, just as specific for the invading organism, serum, or tissue cell as diphtheria antitoxin is for diphtheritic toxin.

ing cell, and is known as *amboceptors*. Many other interesting and definite facts are known about antibodies, but just where produced, and by what tissues, and what is the ultimate composition and mechanism are not definitely known.

Ehrlich believes that the assimilation of food by a cell is accomplished by chemical union between the food substance and some constituent of the cellular protoplasm. He thinks that toxin unites with a cell in the same way; that lytic, agglutinating, and precipitating substances take hold of an invading substance in the same way; that substances that do not enter into chemical union with cells are not either true foods or

toxins, though they may profoundly influence the activities of the cell, as, for example, strychnine. Foods and toxins cannot be extracted by simple processes from tissues after they have once united with them; strychnine can be easily extracted; the nature of the unions must be very different; thus he explains the first difference between toxins and salt and alkaloid poisons. The cell, then, he considers a very complex group of protoplasm surrounded by chemical groups that unite the food particles, and at times toxins, to the larger central group. Borrowing the figures and the terms of chemistry, we have the side-chain theory. The smaller groups are side-chains, or receptors. When the receptors of a cell are gripped by a toxin, if the injury is not too quickly fatal, more receptors are produced according to the law of regeneration of Weigert. The reproduced receptors are cast off into the surrounding media, and are capable of uniting with toxin, and neutralizing it, or rendering it ineffective; in a word, they become the antitoxin.

To meet and explain the various facts known, Ehrlich proposes the three orders of receptors, but, as our time is short, we shall spend no more with this part of the subject.

The various types of immunity are explained on the basis of the side-chain theory as follows:

1. Natural immunity to toxin depends upon—
 - a. Lack of suitable receptors, the toxin finding no point of attack.
 - b. Very low affinity between cell-receptors and toxin,—the immunity of the chicken for tetanus is of this kind, the chicken has no, or but very little, antitoxin.
 - c. The presence of antitoxin; diphtheria antitoxin is found in the serum of 30 per cent of horses, 30 per cent of infants, and 80 per cent of adults.
2. Acquired active immunity depends upon the reproduction and casting off into the internal media of free receptors, or antitoxins.
3. Passive antitoxic immunity depends upon the injection of an antitoxic serum developed in the body of another animal, and capable of neutralizing toxin in the body of the animal injected.
4. Natural immunity to bacteria depends upon—
 - a. Lack of suitable receptors.
 - b. Low affinity of cells for toxin.
 - c. The presence of natural bacteriolysins that can quickly destroy the invading germs.

5. Acquired active immunity to bacteria depends upon the multiplication and excretion of specific bacteriolysins, especially amboceptors.

6. Passive antibacterial immunity depends upon the injection of a bacteriolytic serum.

We have three very important antitoxic sera; for diphtheria, tetanus, and meningitis. Much effort has been spent to produce other therapeutic sera, but so far without much success. The Widal reaction in typhoid, and the biologic test for blood, depend upon specific agglutinins and precipitins.

Phagocytosis and opsonins.—Metchnikoff established the active share of phagocytes in combating bacterial invasion. The polymorphonuclear neutrophils of the blood, and we now know that other cells of the body, as certain epithelial and endothelial cells as well, have the power of taking up and destroying, or at least holding securely locked up, invading bacteria, dust particles, and other foreign bodies. Metchnikoff attributed to such cells not only the function of digestion and removal of waste, but also the chief defense of the vertebrate organism against invading bacteria. This idea is called the "*phagocytic theory*." It also rests upon certain facts that have been fully demonstrated:

1. Leukocytes play an important part in the removal of larval organs in the metamorphosis of insects.
2. Foreign bodies can be seen to be taken up by leukocytes, just as they are taken up by the amoeba.
3. Bacteria are often found enclosed in leukocytes.
4. Diapedesis of white cells takes place at a seat of infection.
5. The number of leukocytes is increased in many infections.
6. Local infections are less dangerous than general infections.

A striking example of this supposed function of leukocytes is seen in the natural immunity of the dog to anthrax. Dog-serum is not bacteriolytic for the anthrax bacillus. Injection of the germs is followed by their being taken up quickly by the leukocytes, but by no development of a lytic serum.

It has been shown that non-virulent strains of pneumococci and streptococci are taken up by leukocytes, while virulent strains are not; and in general where there is great phagocytosis there

is no development of bacteriolytic serum, and *vice versa*.

Phagocytosis, we must conclude, is one of the means of resistance and immunity. It does not explain all immunity and recovery, nor does the side-chain theory. Both theories are supported by many well-known facts. The two means of defense supplement each other, and the theories need not be considered at all antagonistic.

Wright, Hektoen and others a few years ago showed that phagocytosis may be varied. Greater power to destroy bacteria had been known to exist in the leukocytes of immune animals. These men went further, and showed by their experiments that the blood-serum contains something which, acting upon bacteria, makes them more susceptible to absorption by the leukocytes. That this substance acts upon the bacteria, and not upon the leukocytes, can be clearly shown. Like toxin, antitoxin, and bacteriolysins, it is unknown except through what it does. It is unstable. It is, no doubt, akin to enzymes and cytases. It is called *opsonin*, from the Greek word that means *to prepare a feast*. Experiments with this substance indicate that we must modify the original phagocytic theory, and conclude that the action of phagocytes is not immediate, but only subsequent to its action.

The technic of opsonin work is briefly as follows: Three substances are needed,—washed leukocytes, a young culture of bacteria, and serum, perhaps diluted. Equal parts of each are mixed together and incubated at 37° C. for fifteen minutes. Cover-slip films are then made and stained, and the average number of bacteria in each leukocyte counted.

The term *opsonic index* is used to express the relative amount of opsonin in a serum compared with a normal standard. Results of a series of counts might be this:

Serum of a tubercular patient, plus washed leukocytes, plus a suspension of tubercle germs, might give an average of 3 germs in each leukocyte.

Serum of a normal person, plus washed leukocytes, plus a suspension of tubercle germs, might give an average of 4.

A control of salt solution, plus washed leukocytes, plus a suspension of tubercle bacilli, might give an average of 1 germ in every 10 leukocytes.

The opsonic index in this case would be said to be .75.

The technic requires care, and results may differ slightly with different men, just as results differ slightly with different men in blood-counts; but there can be no doubt as to the facts as outlined above.

As was said before, opsonins for many bacteria are found present in the normal serum. The amount is greater in immunity, and it can be increased by the injection of suitable doses of dead bacteria. In treatment done with reference to opsonins, injections of dead bacteria are made from time to time in an effort to build up the patient's resistance, that is, to increase his opsonic index. Treatment seems to be valuable in pyogenic infections, and in tuberculosis other than of the lungs.

Anaphylaxis.—Anaphylaxis is a state of excessive susceptibility, which may be induced in animals by the injection of many protein substances. A small injection of egg albumin, for example, may be given at one time, nothing follows, so far as we can see, but if at a certain time another, generally a larger, dose be given, the animal will die with symptoms of convulsions and "air-hunger." Neither dose alone would have killed; the second dose will not ordinarily kill in less than ten or twelve days; the excessive susceptibility gradually passes away, so that a second dose will no longer kill. The first dose acts in some way to render the animal supersensitive or hypersusceptible. The so-called serum disease that sometimes follows the use of horse serum is, no doubt, a related phenomenon, as are also the tuberculine and the Mallein reactions.

Victor Vaughn attempted to explain anaphylaxis thus: The serum or other protein substance, not toxic as it stands, is broken up into parts, some or one of which is toxic. The serum is broken up by antibodies in the blood of the animal injected, which are increased in amount by the sensitizing dose. Others explain it, not as something broken up, but as something toxic in itself when enough can be taken up by the cells of the body. The sensitizing dose acts to increase the fixed receptors.

Later experimentation goes to show that anaphylaxis may be a very marked infection, while infection may be very mild anaphylaxis. Bacterial cultures can be injected in such a way and at such times as to give the symptoms of anaphylaxis; egg albumen can be injected in such quantities and at such times as to give a continued or an intermittent fever.

In the case of many germs there are no toxins.

We have long talked about endotoxins. It may be that, instead of endotoxins, infection by this type of germ means, according to Vaughn's explanation above, the production of something, even the bodies of the germs themselves, not particularly toxic in itself, but which is made toxic by the action of certain antibodies in the host.

DISCUSSION

DR. F. A. SPAFFORD (Flandreau): I find myself upon the program to open the discussion of Dr. French's paper, but I hardly feel competent to add anything, as he has fully covered the subject, and I feel that as one of the older of the profession I have not been as thoroughly trained along these lines as I could wish. There are a few practical things, however, to which I would like to call your attention, especially as regards infection and immunity in children.

First, in regard to the early feeding of the new-born baby: Perhaps there is no offence more common than the abuse of the digestive organs of the new-born. You all know that the baby is liable to get anything, from castor oil given in molasses to butter and sugar, and all that kind of thing, and even worse. We know that nothing should be given except the colostrum, which not only accustoms the baby's stomach to the function of digestion, but also contains antigens, or similar substances, which are capable of exciting the tissues to secrete antibodies, which are so necessary for the assimilation of the food. It has been found that newly born animals are poorly supplied with complement and antitoxins to enable them to resist germ-invasion or to assimilate their food. It has been suggested that the early milk of the cow, in fact probably of all animals, is rich in antigens, which are capable of exciting the formation of these antibodies in the young animals. It has been found that it is almost impossible to raise guinea-pigs weaned from the first, but when they have nursed for three days, 90 per cent can be reared. Morro, who is quoted by Ramsey of St. Paul in a late article on "Infant-Feeding," took new-born rabbits immediately away from their mothers and fed them upon a variety of milk. Some were fed upon cow's milk, and some upon woman's milk. The result was that after ten days, 80 per cent of them died. He found, however, that when he allowed the new-born rabbits to suckle their own mother for twenty-four hours, and then fed them upon foreign milk, only 10 per cent of them died. If we will, for a moment, go over our own experiences we can but come to similar conclusions as regards infant-feeding,—that the colostrum and early milk have the power of exciting a beneficial reaction in the infant's tissues. We know that the digestive juices have to a certain extent a defensive action, but when large numbers of bacteria are ingested these powers are not

sufficient and have to be assisted by the obligate bacteria, the bacillus bifidus communis and the bacillus lactic aërogenes. These are found in the upper part of the alimentary canal, especially the former, in breast-fed infants, as you go lower the bacilli coli increase. In bottle-fed infants the number of bacterial forms is much greater than in breast-fed, and the dominant type is the bacillus coli. The latter bacilli, under ordinary circumstances and situations, are harmless and possibly useful; if, however, they obtain an entrance into the tissues of the body they may become most actively pathogenic, causing many conditions of inflammation in nearly every part of the system, notably attacks of enteritis, pleuritis, empyema, ulcerative endocarditis, suppuration in the abdominal cavity, and possibly infantile paralysis (Muir & Ritchie), and acute pyelitis in infants, hence the great importance of this subject in artificial feeding.

Another thought in the rearing of premature infants: Always be sure to mix the colostrum and early milk of the mother with whatever food is used. This has been found highly important in the Rotunda Hospital in Dublin. To those of you who wish to pursue this thought further I would recommend "The Hygiene of Infancy and Childhood," by Fordyce, and "Bacterial Infections of the Digestive Tract," by Herter.

DR. C. E. McCAULEY (Aberdeen): I should like to ask Dr. French a question in relation to this anaphylaxis. What are we going to do about diphtheria antitoxin as a prophylactic? Would it be dangerous to repeat an immunizing dose in eight days? I have been in the habit of giving every member of the family four or five doses of antitoxin. I have been in the habit of giving them doses of antitoxin four or five weeks, in order to keep them out of trouble.

DR. FRENCH (Essayist): It is a question that is discussed a great deal, and some think we should be very careful about using antitoxin as a prophylactic. If it is given at all and the dose repeated, the second dose had better be given within a few days. Why anaphylaxis does not always occur is probably because the first dose was not large enough to sensitize the patient. I do not know whether I have answered the question.

DR. McCAULEY: Perhaps the dose is not large enough, or the effect does not last long enough.

DR. FRENCH: I think another paper to be given later on the program will say something about the question. I know that this use of antitoxin is considered dangerous by many.

DR. McCAULEY: The proper thing would seem to be, not to give it at all or to give a big dose at the beginning.

DR. FRENCH: I believe it is so used in the big hospitals.

REPORT OF THE REGULAR THURSDAY SURGICAL CLINIC AT THE MINNESOTA UNIVERSITY HOSPITAL.*

FRACTURE OF THE NECK OF THE FEMUR OF THREE YEARS' STANDING; CHRONIC
TYPHOID OSTEOMYELITIS OF THE LEFT FEMUR; COMPLETE EXTROPHY OF
THE BLADDER AND EPISPADIUS IN A FIVE MONTHS' BABE

CONDUCTED BY J. E. MOORE, M. D.

Professor and Chief of the Department of Surgery

CASE 1.—Hospital No. 1019.

Diagnosis.—Fracture of the neck of the left femur of three years' standing.

History bearing upon the present condition.—Patient, male, aged 46; occupation, laborer. His injury has made him a pauper and inmate of an almshouse, despite his splendid general health. Three years ago the patient, while walking on his way to the woods from Duluth, with an eighty-pound pack-sack on his back, stumbled, falling forward to the ground on his hands and knees. No great pain was experienced at the time. He got on to his feet unaided, walked some sixty yards, and then with a sudden, most excruciating pain in his left hip, sank to the ground, from which time he has never walked unaided or borne weight upon the left lower extremity. He was removed to a hospital where a Buck's extension was applied for eleven weeks, followed by a plaster cast for nine weeks, both being without avail. He was admitted to the University Hospital, walking with crutches very indifferently.

Examination.—The left lower extremity lay greatly everted and shortened. Rotation of the hip in the extended position, good. Flexion of the hip onto the abdomen, complete. Bony crepitus is plainly marked when the hip is rotated in the flexed position.

The above manipulations were made without causing pain.

Measurements.—From the anterior superior spine to just below the internal malleolus, left extremity, $33\frac{1}{4}$ inches; right extremity, 35 inches. The top of the left trochanter is one-half inch below Bryant's line, as compared with the normal of two inches on the right side. The left trochanter is two and one-half inches above Nelaton's line. Circumference measurements: Left thigh, 14 inches; right thigh, $17\frac{1}{2}$ inches; left calf, $11\frac{5}{8}$ inches; right calf, $12\frac{1}{2}$ inches. When the patient bears weight on the left extremity the trochanter is pushed upwards two

inches, which, upon the removal of the weight, slips down again.

Operation.—A U-shaped incision, three inches wide at its base, was made over the external lateral aspect of the hip, through the skin and fascia lata with the convex portion of the U a little below the great trochanter directed downwards. This flap of skin and fascia was turned upwards, so exposing the great trochanter. The end of a gigli saw was now passed through the capsule and hip-joint cavity surrounding the great trochanter, which was sawed free at its base and turned upwards with its attached muscle, so exposing most beautifully, and giving free entrance and access to, the hip-joint cavity. The site of the fracture of the neck was plainly demonstrated, the nutrition of the head and attached fragment of the neck being very good. The fractured ends were trimmed so as to obtain good approximation, which was maintained by driving two wire nails through the site of the removed trochanter, longitudinally through the neck of the femur. Upon manipulation of the thigh the head of the bone now followed the same in all directions. The trochanter, with its attached muscles, was returned to its normal position and nailed there with a single nail. The capsule was closed with interrupted fine bronze wire and chromic catgut sutures. The fascia and skin were closed in layers. The patient was placed on a fracture-bed, and a Buck's extension with ten pounds and a hip splint applied.

CASE 2.—Hospital No. 962.

Diagnosis.—Chronic typhoid osteomyelitis of the left femur.

History bearing on the present condition.—Patient, an Indian schoolboy, aged 17. Two and one-half years ago the patient experienced a severe typhoid infection, during the convalescence from which, while at a hospital, there developed in the lower third of the right leg over the fibula a painless abscess about the size of a walnut, which was lanced by the attending physician. In the following week the left thigh began to painlessly enlarge, accompanied by fever, but without chills and nausea. This swelling was treated by

*Reported by A. C. Strachauer, M. D., Associate Surgeon, Minnesota University Hospital.

hot applications for several days, and then incised over the lower anterior surface of the femur. A quantity of pus was liberated, the wound draining freely for seven weeks, when it spontaneously closed. The patient was removed to his home on a stretcher and placed in bed, where after a month two sinuses opened on the inner aspect of the lower third of the left thigh. For six months the patient was confined to his bed, too weak to get up, after which he was able in time to walk with crutches. This was still his means of locomotion at the time of his entrance to the University Hospital. Six months before his admission, or nearly two years after the beginning of the osteomyelitis, the healed wound from the original incision over the lower end of the femur, opened and discharged a moderate quantity of purulent material, following which the two sinuses on the inner side of the thigh spontaneously closed.

Hospital examination of the left lower extremity showed an atrophied limb, the leg slightly flexed and contracted. Over the lower third of the thigh there was a discharging wound through which projected the end of a large bone sequestrum. On the inner side there were the two scars from the healed sinuses. The femur was greatly enlarged, having a circumference twice that of its mate. Six weeks ago Dr. Moore removed the sequestrum, which was about seven inches long and an inch in diameter, and curetted and thoroughly cleaned out the cavity with ninety-five per cent phenol followed by alcohol. The cavity was so foul that it was considered inadvisable to fill it with bone-wax. After some ten days dressings with balsam of Peru the cavity was filled with Moorhof's bone-plug as a dressing. The boy was now shown and demonstrated as a post-operative case, six weeks after the removal of the sequestrum. About one-third of the wax had been extruded from the cavity, the wound being clean and not discharging. The cavity was again filled with the wax.

This use of the Moorhof's bone-wax as a dressing in purulent discharging cavities was originated and developed in this clinic. It is a saver of time and labor, and spares the patient the excruciating pain and agony of repeated gauze packings. Moorhof, in his directions for the use of the bone-wax, lays down the insistent rule that the wax can be used only in *aseptic dry cavities*.

This case, as one of a number, demonstrates the great success attained in its use as described.

CASE 3.—A case of complete exstrophy of the bladder and epispadias, in a five months' babe

from Wright County, was presented and demonstrated. The lower anterior abdominal wall, the symphysis pubis and the anterior half of the urinary bladder were completely lacking. The posterior half of the bladder alone closed the defect in the abdominal parietes, so alone confining the viscera within their cavity. The mucous membrane of the so exposed bladder was red, being deeply congested and inflamed. Both ureteral openings were plainly visible, and their regular periodical spoutings of urine as it came from the kidneys, could be plainly observed like two miniature fountains.

Operative treatment is not indicated in this case until the diaper age, at least, has been passed, due to the absolute inability of maintaining post-operative cleanliness. In addition to this, babes do not withstand the shock from so formidable a procedure as required in the operative repair of the condition.

Cleanliness, to avoid an ascending infection of the ureters and kidneys, and protection of the surrounding skin from urine by suitable ointments constitute the treatment advised.

Reference to the various operations for the condition was made, they being as follows: plastic operations to repair the defect with flaps from the abdomen, thigh, and scrotum, or separated loop of intestine; transplantation of ureters, with or without the trigonal orifices, or with the complete base of the bladder into the rectum, sigmoid, vagina, urethra, or loin; osteotomy of the ilium from the crest to the sacro-iliac foramen, and forcible approximation of deficient pubes.

These procedures are all unsatisfactory, the surgery of the condition and of each case being absolutely experimental. Ascending infection of the ureters and subsequent pyelitis and pyonephrosis commonly result with or without operation. The hairs on the skin-flaps in the various plastic procedures become encrusted with urinary salts, and so are the source of much trouble.

NOTE.—The above cases, and all patients in the hospital, are examined daily by groups of two students to a patient, who, without access to the regular hospital records, take their own histories and data, and make all necessary physical and laboratory examinations, so arriving at their own individual diagnoses, which are demonstrated to the junior surgical and laboratory staff, who make the necessary elaborations or corrections. The post-operative progress is likewise observed and followed.

A DICEPHALIC MONSTER

By F. W. BULLEN, M. D.

HIBBING, MINN.

This monstrosity was born near Hibbing, Minn., July 31, 1911. The mother was a Montenegrin, aged 30; this being her fourth pregnancy. She had been in labor three hours when I first saw her, and one foot and leg of the fetus were then protruding through the vagina. The extremity was cyanotic and had evidently been down some time. The uterine contractions were strong, with about three-minute intervals, but the presenting part did not advance any during the contractions.

After a somewhat hasty examination I con-

cluded that it was a case of twin pregnancy, the first fetus lying in the podalic position and the second in the cephalic. I sent for assistance, and, in the meantime, by traction on the presenting extremity during the contractions, I managed to extract the fetus as far as the thorax. Dr. Brooks then gave her chloroform, and I delivered as far as the neck, but could not extract the head. I tried to apply the forceps to the after-coming head, but could not get them to lock. It was then evident that we were dealing with some kind of monstrosity, and we concluded that it would probably be necessary to perforate the

head, but not having a cephalotribe handy, we decided to try extraction once more. So I made traction downward and backward with the right hand over the shoulders, pushing downward over the fundus with my left while Dr. Brooks made simultaneous traction by grasping the extremities. In this manner we finally succeeded in delivering.

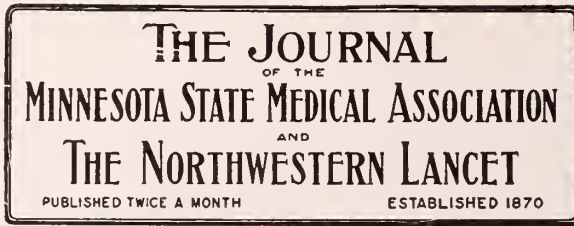
It is an almost perfect specimen of a dicephalic, dibrachic monster, twenty-one inches in length, and weighing about nine pounds. The heads are about the same size, and the contour



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is good except from some flattening where the heads were in contact. The circumference of the left head is $14\frac{3}{8}$ in., of the right $14\frac{1}{4}$ in., and of both $2\frac{1}{2}$ in. Division occurs at the sixth cervical, and the necks are equal in length. The body and extremities are those of a well-developed male child.

This monster was no doubt viable at the beginning of labor and could have been delivered viable by Cæsarean section if a physician had seen her previous to the onset of labor and had made a correct diagnosis of the condition.



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Minneapolis

SUBSCRIPTION PRICE, TWO DOLLARS A YEAR

Publication Office: 839-840 Lumber Exchange
Minneapolis, Minn.

DECEMBER 15, 1911

THE INDIFFERENCE OF PHYSICIANS TO THE STATE TUBERCULOSIS EXHIBIT

The anti-tuberculosis Exhibit which has traveled over a greater portion of the state has demonstrated the necessity of arousing medical men to a higher degree of activity in the education of the people. Probably a good many physicians who understand the dangers of tuberculosis, and who have grown weary of the word *tuberculosis*, do not appreciate the necessity of a continuous education of the younger and growing generations. Because we know what tuberculosis in its widest sense means, it does not follow that all others, particularly ignorant laymen, are equally informed.

Nine towns were visited by the Exhibit between October 31st and November 24th. In three of the towns the physicians were indifferent, and most of them "had a call" that prevented them from taking part. In one of the larger towns the health officer did absolutely nothing for the exhibitors. In another town the doctors were lax, and offered no assistance, failing even to provide a meeting-place when they had previously promised to do so. In one place the people were backward, the physicians were not on friendly terms, and the county commissioners wanted fifteen dollars for the use of the court-house! In the remaining six towns the

physicians were helpful and the attendance was good.

Dr. A. R. Blakey, who has charge of the Exhibit, is of the opinion that the school men are more dependable than the physicians for interest in the work. It is gratifying that educational members of the community are looking at the Exhibit as an educational feature. The doctor, however, should not let such an occasion slip from his grasp. He is the one who should be foremost, enthusiastic, and prominent.

The State Board of Health has been under considerable expense in maintaining the Exhibit, and the Board's work must be encouraged and stimulated.

QUIET ZONES FOR SCHOOLS AND HOSPITALS

A Society for the Suppression of Unnecessary Noise has a very forceful existence in New York. Its object and aim is to provide a quiet zone for schoolhouses and hospitals. It also aims to educate the people that needless noises are a menace to public comfort and health, and that, as far as possible, useless noises should be suppressed. It is exceedingly important that hospitals should be so located that the buildings can be erected far from the street line and thus away from noise, but in the larger cities hospitals and schoolhouses have been built before improvements extended into the needed quiet districts.

It has been demonstrated in New York that a zone may be established where comparatively quiet conditions may exist. Streets surrounding hospitals and schools can be paved with materials that are practically noiseless; street-cars can go by buildings without the clatter and bang that are so common in down-town streets; and drivers of wagons, carts, and automobiles are requested to go as quietly as possible. The blowing of factory whistles and the ringing of church bells and public tower-clocks can be dispensed with in the quiet zone.

Signs are posted on corners asking that the quiet zone be respected. School teachers in the schools that are relieved of needless noise, say that they appreciate the effect of the movement; their duties are less irksome, their nerves are in better order, and pupils are more attentive and learn quicker.

It is unnecessary to say why a quiet zone should be established about a hospital, particularly if nervous people are the patients. Some

hospitals consider only the easy and efficient traction facilities when their boards build near car-lines, and undoubtedly some patients like the street noise for diversion, but, on the whole, the hospital demands a quiet spot.

The suppression of noise could be carried further, even into homes and public buildings where doors are carelessly slammed by thoughtless people and where ill-mannered folk walk on their heels regardless of the irritating effect upon others.

Societies for the suppression of unnecessary noise should be established all over the country, and every town that hopes to become a city should guard its noises and the makers of noise.

THE ABOLISHMENT OF CAPITAL PUNISHMENT

At the last session of the late legislature of Minnesota a law was passed to eliminate hanging for capital crimes. There seemed to be but little opposition at the time to the passage of this new law. Lately, our clerical friends in Minneapolis seemed to have been greatly stirred up, and many of them have expressed their opinions very energetically. Those who favor capital punishment appear to be in the majority; at least, they have made the most noise over it, but, fortunately, a considerable number of ministers, equally prominent, have taken the other view. It is rather remarkable that clergymen should openly demand the death of a murderer by hanging, when they are trying to teach the people the spirit of Christ. Hanging is a relic of barbarism, and is a crude and spectacular way of revenging a crime.

The men who are interested in penology and who have studied the subject with scientific minds, do not favor capital punishment as a cure for criminal acts. The average murderer is given altogether too much attention by the press and the public. His mind becomes exalted over his notorious acts, and in the lime-light in which he basks he begins to think himself a hero or a martyr, and his fellow deviates become callous and indifferent by imitation, and do not hesitate to follow or excel his acts. It has never been shown that hanging or electrocution has in any degree diminished crime. It has been asserted that there are 100,000 murderers in this country, and that 75 per cent of them are never discovered, and of the 25 remaining per cent many go free through legal technicalities.

The fundamental cause for crime is a physical

or mental defect in the individual. It is fostered and intensified by environment, example, and loose morals. Unsanitary surroundings, lack of proper foods, and limited educational facilities round out the criminal career. Is it any wonder that crime increases when the municipality fails to guard and guide the growth and development of the future criminal? The man who commits a crime and who pays the penalty by prison life for a period of months or years should, after his release, be as carefully watched and helped as a convalescent from an acute illness. Social organizations, backed by philanthropic aid, should see that the prisoner who leaves his cell, is made to feel that he is still a man, and that encouragement and assistance is fat for his depreciated moral fiber.

The man who is convicted of a serious crime that demands his life-long removal from society, should be in a hospital or a penal institution, and provided with such things as will build him up morally and physically.

If he goes to a hospital he is treated as one sick or deficient, and when he recovers he should be transferred to a suitable and safe place for detention.

If his crime warrants a life in an institution, he should still be treated as a human being. Better still would be the penal servitude that prevails in other countries. Isolated and forgotten is the worst punishment that can be inflicted, and the one that will deter others from following him.

Deprive the constitutional criminal of his power of propagation, improve the health and education of those likely to go wrong, and the incentive for crime will diminish.

DR. MAX P. VANDER HORCK

The sudden and unexpected death of Dr. Vander Horck on Tuesday, December 5, 1911, shocked the medical fraternity of Minnesota.

Dr. Vander Horck was 49 years of age and in the prime of life except for a physical disorder which occasionally disabled him. He had not been able to attend to his office work for nearly ten days, but no one feared a serious outcome.

Dr. Max, as he was commonly known, was a genial soul and made friends on all sides. His personality was a winning one, and he will be missed by a large number of acquaintances. His career as a teacher in dermatology and genito-urinary work was exception-

ally brilliant. His instruction to students was marked by clearness in the fundamentals of his subject. The University graduates from the Medical Department will always remember their teacher as one who knew what he was talking about and also knew how to impart his information to others.

Dr. Vander Horck was born in St. Paul, and in his student life he attended the University, but graduated in medicine from Jefferson Medical College in Philadelphia. He spent three years in study abroad, and when he began practice in Minneapolis he was recognized as an authority in his specialty. He was the consultant in his line of work in most of the hospitals in Minneapolis and was a member of the County, State, and American Medical Associations.

DR. JUDD GOODRICH

Another sudden death in the medical profession was that of Dr. Judd Goodrich, of St. Paul, on November 30, 1911.

For some time a weakness of his heart gave his friends much concern, but the day previous to his death he attended to his surgical work as usual.

Dr. Goodrich was born in Minneapolis, graduated from the College of Medicine and Surgery, University of Minnesota, in 1895, and after his hospital year practised medicine in St. Paul.

One of his home papers in St. Paul speaks of him in this way:

"It was probably his conscientiousness to duty that caused his death," said one of the doctors of St. Paul in speaking of Dr. Goodrich. "He stood for everything that was upright, was always pleasant and kindly, and to an unusual degree was given the unqualified confidence of all, both patients and fellow medical men.

"Dr. Goodrich's life typifies to a marked degree that the door of opportunity is not closed, for, although in his early professional career he battled against many difficulties, he was able to swing wide its portals and finally attain his cherished aim and ambition—a competent and conscientious surgeon of the front rank.

"His creed was to 'do no man any wrong, but extend the helping hand,' and he lived that life day by day."

CORRESPONDENCE

INFORMATION SOUGHT

Duluth, Dec. 5, 1911.

TO THE EDITOR:

I have noticed by reading the published report of the Publication Committee of the Minnesota State Medical Association that the Publication Committee has again let the contract for one year for the publication of the proceedings of the State Medical Association to the Journal of the State Medical Association and the Northwestern Lancet. I would, therefore, like to ask the publication committee why they did not insist upon the change of name of the journal that was fortunate enough to get this contract, to correspond with the desire as expressed by the House of Delegates.

Also why, in spite of the fact that the *St. Paul Medical Journal* offered to make the name to suit the recommendation of the House of Delegates, as well as allow the Association to select the editor and at a price about \$400 less, their offer was ignored?

I ask these questions, not in a spirit of criticism, but for the purpose of obtaining information. These questions have been asked me many times by members of our Association, and I have been unable to answer them. The members are entitled to know facts, and I know of no better way to spread the information than through the columns of our Journal.

Fraternally yours,

W. H. MAGIE.

ANSWER

We are very glad that Dr. Magie has asked the above questions, and we answer them with pleasure, more especially as we believe the entire discussion before the House of Delegates was based upon a misconception or a lack of knowledge of the points at issue.

In our issue of January 1st, of the current year, we set forth in detail why the Lancet Company could not change the name as requested last year, and in the same issue we printed a large number of letters from the makers of our medical literature, who are the men most vitally interested in the character of the journal of the Association. In our issue of July 15th we set forth our reasons for an entire change of name. If the points made in these two editorials, and if the advice of the Council, given after its special

meeting in January and at its meeting in October, have no weight with the Association, then we mistake the disposition of the Association.

At the October meeting the House of Delegates referred the details of the contract to the Council, but the Council seemed to be in doubt as to what it was authorized to do, and in the absence of the official stenographer to give this information, the Council referred the matter back to the House of Delegates to be convened in special session, recommending, however, that the name be THE JOURNAL-LANCET. With much difficulty a bare quorum of the House was obtained, and the matter was referred to the Publication Committee to have the current transactions published as they saw fit. They awarded the contract to THE JOURNAL-LANCET, by a unanimous vote, and with the understanding that the name of the paper after Jan. 1st is to be THE JOURNAL-LANCET.

As to the choice of an editor, the contract with the Association gives the Association power to choose, and it made its choice.

The editor is too modest to say why the House of Delegates or the Publication Committee did not see fit to save the \$400 named in Dr. Magie's communication; but it is quite presumable that the manner in which this paper has served the Association for several years had some influence upon them.—THE EDITOR.

MISCELLANY

A PLEA FOR CO-OPERATION

The president of the North Dakota State Association and the Medical Defense Committee are sending to the members of the Association the subjoined letters, which are of just as much interest and importance to the members of any other state association as to those of North Dakota. President Spicer's words have the true ring, and the physician who will not respond to every appeal made in the letter, when practicable to do so, should ask himself if he has a right in the medical profession. We heartily commend these words to our readers.

Litchville, N. D., Dec. 15, 1911.

Dear Doctor: At this season of the year, when all are especially busy with personal duties and exhilarant expectations for the approach of the holiday festivities, we should stop to consider and to remember also that it is the most opportune time to recall to our minds the fact that we have other

fully as important obligations, the collective fulfillment of which makes possible the growth, prosperity, and perpetuation of the medical fraternity in the State of North Dakota. There never was a time in the history of our organization when the needs of a personal and an individual support were more strongly felt.

The unit of the state and national associations is the little county medical society, and only by active membership in the latter are we members of the former. Are we each doing our duty towards making this society what it should be? Let us each formulate a new-year resolution to attend each and every meeting of the society during the next year, take an active part in all its deliberations, and endeavor to foster harmony and mutual friendship among its members.

At the last meeting of the State Association there was passed a medical-defense act to take effect January 1, 1912, by which each member of that body in good standing is defended against malpractice suits. Another act made THE JOURNAL-LANCET the official organ of the Association. The annual dues were raised to \$5. This fee entitles members in good standing to the privileges of the medical-defense act and to free copies of the Journal in which all official acts and proceedings of the State Association, as well as many other valuable papers and general medical news of the Northwest, are published semi-monthly. These items alone should be an incentive to every doctor in the state to become an active member. Doctor, you cannot well afford to be without this protection!

The State Board of Medical Examiners has instituted a campaign against all medical fakirs who are plying their trade promiscuously in all parts of the state and robbing the people of their money and often their health. It should be deemed the special duty of every member of this Association to concur with this Board in its efforts to rid the state of North Dakota of charlatans and medical sharks and medical fakes, of whatever kind and source. Any violation of the medical-practice act known to any member should be promptly reported to the Board.

The State Association is making efforts to secure the services of Dr. McCormick for a series of lectures to be given at several prominent places in the state, and your presence at these lectures is earnestly requested. You will be well rewarded should you attend.

The next medical meeting of the State Association will be held at Valley City. It is the earnest desire of the officers of the Association that the meeting shall be one of merit. It can be made so only by the hearty support and co-operation of every member by his presence at the entire session and an active participation in its deliberations.

Secretaries of the county societies should inform the state secretary at the earliest possible moment of the names of those who are to take part in the program, giving the subject of their addresses in full. The committee on program is securing a rare treat for those who attend. Doctors of international reputation will take part in the program.

The welfare of the county medical society, the State Association, and the medical fraternity of this

state, as well as the very health of the people of the state, rests in our hands. Believe that it is a personal matter with each and every one of us to build up, support, and strengthen medical organization in this state, for by it we are better enabled to combat the greatest enemy of mankind—disease. By it only may medical legislation be enacted, thus actually forcing upon the people, as it were, the greatest of all medical principles, that of prophylaxis and preventive medicine. By organization we hope to concur with our sister states in the consummation of a national department of health, whereby the physical welfare of the nation may be at least as important as the physical being of its hogs and cattle.

Fraternally yours,
C. E. SPICER, M. D.,
President of the North Dakota State
Medical Association

December 1, 1911.

Dear Doctor:

At the last annual meeting the North Dakota State Medical Association decided to defend civil suits for malpractice against any of its members.

The committee has contracted with the law firm of Bosard & Twiford, of Minot, to represent the Association in these cases, and they will defend such cases as are started on and after January 1, 1912.

Any member desiring to apply for this defense should notify the chairman of this committee and must send to the Secretary of the North Dakota State Medical Association all letters, complaints, or other evidences of threatened suit immediately on receipt of the same. This is necessary, in order that the proper steps may be begun at once to make the most effective defense possible.

Sincerely yours,

A. J. McCANNEL, Minot, Chairman
H. H. HEALY, Grand Forks
E. P. QUAIN, Bismarck
L. S. PLATOU, Valley City
C. N. CALLENDER, Fargo
Committee on Medical Defense,
North Dakota State Medical Association.

REPORTS OF SOCIETIES

MINNESOTA NEUROLOGICAL SOCIETY

The Minnesota Neurological Society met at the Town and Country Club in St. Paul, Nov. 23d, with nine members present. The following program was carried out:

Dr. H. W. Jones reported a case of myoclonia. Dr. Dunning reported a case of ataxic paraplegia. Dr. Scott gave a report on some facts bearing on the physiology of the nervous system, especially concerning the conduction of impulses by nerve-fibres, and the relation of conductivity and excitability to exhaustion of the nerves. Dr. Johnston reported on the mesencephalic root of

the 5th nerve as having to do with muscle-sense for the muscles of mastication.

A. S. HAMILTON, M. D., Secretary.

UPPER MISSISSIPPI MEDICAL SOCIETY

The society met at Wadena Oct. 7th.

Dr. J. J. McKinnon, of Wadena, read a paper on "Albuminuria." Dr. Leo Crafts, of Minneapolis, gave "Some Observations on Epilepsy," followed by a clinical presentation of cases of many different types.

All present united in saying that it was one of the best meetings ever held. The next meeting will be held in Brainerd.

G. H. LOWTHIAN, M. D., Secretary.

MINNESOTA ACADEMY OF MEDICINE

The Academy met at the Town and Country Club, Wednesday evening, Dec. 6th. Following the dinner at seven o'clock the regular program was taken up at 8:30. There were present thirty-nine members.

The president, Dr. John L. Rothrock, announced our loss by death of two active members, Dr. Judd Goodrich, of St. Paul, who died Nov. 30th, and Dr. Max Vander Horck, of Minneapolis, who died Dec. 5th. On motion it was decided to appoint a committee of three in each instance to draft suitable resolutions, which should be put on the minutes and a copy sent to the respective families.

Dr. R. A. Hall read his inaugural thesis entitled "Status Lymphaticus." The subject was discussed by Drs. Moore and Stumm.

Dr. C. Eugene Riggs read a paper entitled "Some Things Practical in Serodiagnosis," which was discussed by Drs. Snévé, Jones, Moore, and Hamilton.

The Academy adjourned at ten o'clock.

A. W. DUNNING, M. D., Secretary.

HENNEPIN COUNTY SOCIETY

The Society met on Nov. 6th with fifty members present.

A communication was received from Dr. John Gately stating that he is about to erect a 12-story building on Seventh street next to the Orpheum theatre, and offering to make it a "professional" building if agreeable to the Society. The communication was referred to the Building Committee to report as early as practicable.

The matter of giving a course of medical lectures at the Public Library rooms was con-

sidered, and a larger committee appointed to carry out the plan.

Dr. Leo M. Crafts read a paper on epilepsy, which was discussed at length.

Dr. W. A. Jones read a paper on "An Introductory to the Study of Aphasia." Owing to the lateness of the hour there was no discussion on this paper.

Drs. A. A. Laurent and A. O. Torland were elected to membership.

C. H. BRADLEY, M. D., Secretary.

NEWS ITEMS

Dr. T. Ohrbom has moved from Duluth to Sebek.

Dr. C. N. Burton has moved from Elmore to Blue Earth.

Dr. L. A. Larson, a graduate of Rush, has located at Northfield.

Dr. E. Jay Clemons has moved from Aberdeen, S. D., to Orange, Calif.

The new hospital for the Crittenton Home of Fargo, N. D., was dedicated last month.

Dr. Ida M. Alexandria, a graduate of the State University, has located at Clarissa.

Dr. O. S. Haverfield has moved from Billings, Mont., to Musselshell, in the same state.

Dr. W. S. Nickerson, a recent graduate of the State University, has located at Hoffman.

Dr. Adolph Blitz, who formerly practiced in Minneapolis, died last month at Boise, Idaho.

Dr. T. O. Sanbo has returned to Lemmon, S. D., and decided not to seek a location elsewhere.

Dr. Geo. F. Drew, of Crary, N. D., is doing post-graduate work at the New Orleans Polyclinic.

Dr. Peter Boysen, of Pelican Rapids, was married last month to Miss Ellen Ellberg, of Minneapolis.

Dr. S. G. White, of Ambrose, N. D., was married last month to Miss Floy May McEvers, of the same place.

Dr. Ivan M. Linson, a 1910 graduate of Bennett, has accepted a position with the Lidgerwood (N. D.) Hospital.

Dr. F. L. Cass, of Huron, S. D., is doing post-graduate work in Chicago. He is devoting his attention to internal medicine.

The firm of Drs. Cremer, Haessly, McGuigan & Hanson has consolidated with that of Drs. Claydon & Johnson, both of Red Wing.

Dr. D. D. Turnacli, a recent graduate of the State University, has located at Osakis, taking the practice of Dr. Titus, of that place.

Dr. J. E. McCoy, who has been practicing a couple of years at Henning, has accepted a position with a mining company at Ironton, Mich.

Dr. P. M. Hall has been appointed a member of the advisory commission for the State Sanatorium at Walker, to succeed Dr. G. F. Roberts, resigned.

The medical staff of the Red Wing Hospital has been reorganized. Dr. M. W. Smith is president; Dr. A. W. Jones, vice-president; and Dr. J. V. Anderson, secretary.

Dr. S. C. Schmitt, of Mankato, has located in Minneapolis, and has offices at the corner of Fifteenth Avenue and Lake Street. Dr. A. F. Schmitt will succeed to the firm business.

Dr. L. E. Safely, of Livingston, Mont., entertained a number of physicians last month at his mountain home in the Gallatin basin. Dr. W. J. Mayo, of Rochester, was one of the guests.

Ten cases were operated on at the semiweekly surgical clinic of the University Hospital on Nov. 9th. As the clinic opened on Sept. 28th, it is evident that there will be no lack of cases for teaching purposes.

St. Luke's Hospital of Fergus Falls closed its fiscal year on Nov. 1 completely out of debt, although a new addition was built within the year. It received 400 patients during the year, and did a large amount of charitable work.

Active steps are being taken toward the establishment of a hospital at New Ulm. No doubt a handsome building will be put up soon. It will be conducted by the Lutherans. Dr. L. A. Fritsche is one of the leaders in the movement.

Dr. A. H. Youngs, of Pierre, S. D., has been appointed by Gov. Vessey a member of the State Board of Medical Examiners to succeed Dr. J. M. Walsh, who recently resigned. He has also been appointed superintendent of the County Board of Health.

The New Hopewell Hospital, of Minneapolis, which will care for tubercular patients, opens in its new building this month. The new building cost \$80,000, and yet much of the work on it was done by inmates of the city workhouse. Its yearly maintenance will cost nearly \$40,000.

Dr. A. C. Rogers, of the State School for the Feeble Minded at Faribault, entertained the Rice County Medical Society at its meeting last

month. Dr. Westbrook, dean of the Medical Department of the State University, read a paper on the trend of medical education. Other papers were read.

The physicians of Bismarck, N. D., were pleasantly entertained last month by Major Brechemin at Fort Lincoln. Typhoid vaccination and salvarsan were the topics discussed at the meeting. Luncheon was served to the guests at the Fort.

The Black Hills District Medical Society of South Dakota met at Deadwood, S. D., last month. Officers were elected as follows: President, Dr. R. J. Jackson, Rapid City; vice-president, Dr. F. E. Clough, Lead; secretary, Dr. F. E. Ashcroft, Deadwood; delegate, Dr. J. W. Freeman, Lead.

Eleven nurses were graduated from the Northwestern Hospital, of Minneapolis, last month. Other hospitals in Minneapolis and St. Paul and throughout the Northwest graduated good-sized classes, and yet the "profession" is not at all crowded. There is a continuous call for good nurses, and at good prices.

Dr. Oscar C. Breitenbach, who recently located in Frazee, came from Escanaba, Mich., of which city he was health commissioner and director of the city laboratory. In the latter position Dr. Breitenbach made a thorough examination of the etiology of endemic-epidemic typhoid fever, and did original work on choleraform diarrhea of cold weather.

St. Paul and Minneapolis are seeking new charters, and when obtained there will come an opportunity for each to deal anew with health problems. St. Paul proposes in its prospective charter to pay its health commissioner sufficient salary to enable him to devote his entire time to the city's work, and also to put his inspectors under civil service rules.

The profession of the Twin Cities has just lost from its ranks two men of genial personality and high professional standing. Dr. Judd Goodrich, of St. Paul, died on Nov. 30th, at the age of 42; and Dr. Max P. Vander Horck, of Minneapolis, died on Dec. 5th, at the age of 47. Both doctors were born in Minnesota, and have been closely connected with the State University and its work, and they attained success in their profession because of superior scientific knowledge. Further mention of these men is made in our editorial columns, and more extended notice will appear later.

PRACTICE FOR SALE

General practice in a Minnesota city of over 6,000 population, two railroads, prosperous agricultural community. Offices well located; equipment worth over \$1,000. I am leaving to enter special field and will sell for price of equipment. Doing about \$300 a month. Address C. A., care of this office.

FOR SALE

An unopposed practice in a good live village in southern Minnesota. Nearest competition 13 miles away. I have been located here 11 years and have a good practice. Expect to move to a larger town. \$800 will make the deal. Address P. C., care of this office.

PRACTICE FOR SALE—EXCELLENT . OPENING

As I wish to retire permanently from practice on account of poor health. My field is a large one for both medical and surgical work, in a Minnesota city of 12,000. Will sell my residence and practice at a very reasonable price. This is an excellent opening. Address G. S., care of this office.

POSITION WANTED

A graduate of a first-class medical school who has been one year in a hospital as interne and spent one year in practice and laboratory work, desires a position as an assistant or partner, or a position requiring very little capital to start. Address H. W., care of this office.

FOR SALE

A 5-passenger 1911 Ford automobile used only 3 months, cost \$900 without extra equipments, will be sold at half price; party leaving city. This price includes glass front, speedometer and good top. Everything is in the best of condition. Address L. S. F., care of this office.

PRACTICE FOR SALE

Physicians contemplating locating in the West should ask for particulars. Best city in Washington; business well advertised; equipment all for \$500. Address W. S., care of this office.

APPARATUS AND OFFICE FIXTURES FOR SALE

On account of dissolution of office partnership we have for sale one 16-in. Western X-Ray Coil, tubes, tube-shield, stands, fluoroscope, high-frequency resonator—in fact everything complete for x-ray work and high-frequency treatment. Cost, over \$550.00; for sale for \$275.00. One Bausch & Lomb microscope with movable stage, as good as new. Cost, \$90.00; for sale for \$55.00. One Nelson vibrator, flexible shaft and fittings, wall bracket, etc. Cost, over \$45.00; for sale for \$25.00. Water centrifuge, Thoma blood-count apparatus; office furniture, etc. We guarantee everything in good working order; can be seen at our office; Drs. Leland & Murphy, 1525 E. Franklin Ave., Minneapolis.

Doctor: If you want practical post-graduate work during fine season in the delightful city, write for particulars. New Orleans Polyclinic, P. O. Box 797, Post-graduate Medical Dept., Tulane University of La.

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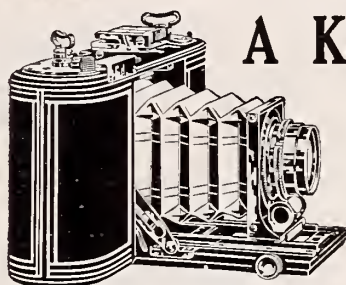
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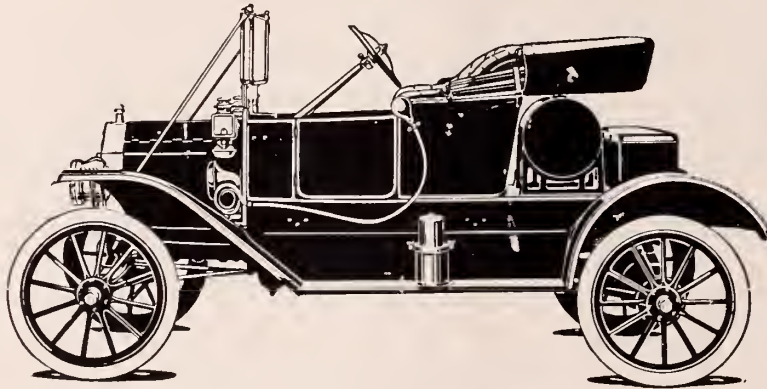
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